

S6161-VM-FSE-010

REVISION 1

0910-LP-028-9020

TECHNICAL MANUAL

FOR

DISPENSER, ICE CREAM, MODELS 702, 741 & 772;
DESCRIPTION, OPERATION AND MAINTENANCE

“Distribution Statement “A”: Approved for public
release; distribution is unlimited.”

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND

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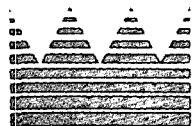
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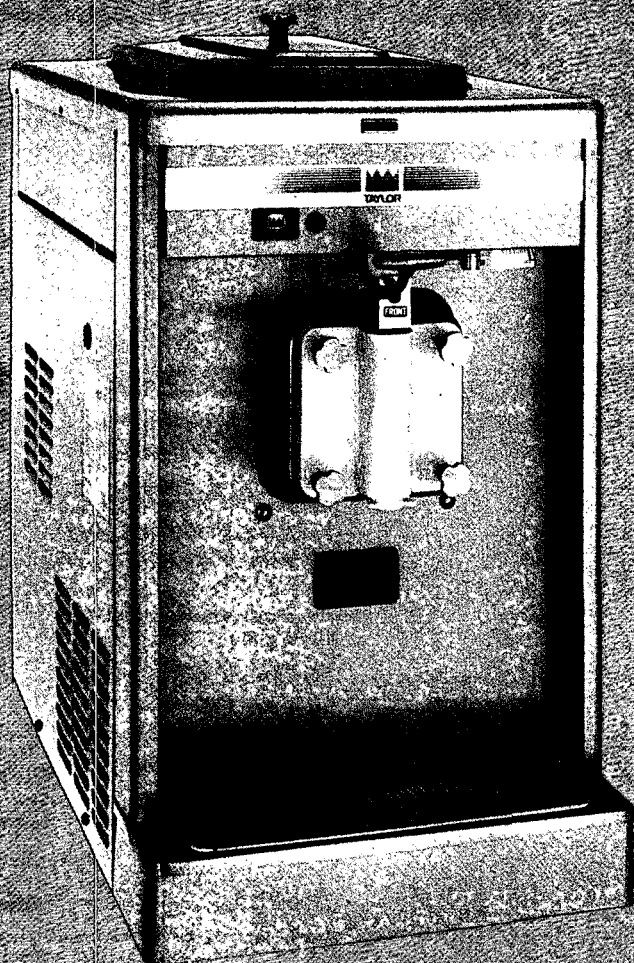
Beatric Foods Co. Taylor Freezer Division
Blackhawk Blvd.
Rockton, IL 61072
CAGE No. 80739

OPERATOR'S MANUAL



TAYLOR

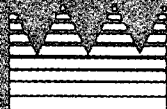
Navy Soft Serve Freezers



Model 702



Model 772



TAYLOR
ROCKTON, ILLINOIS 61072

Complete this page for quick reference when service is required:

Taylor Distributor: _____

Address: _____

Phone: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage _____ Cycle _____

Phase _____

Maximum Fuse Size: _____ Amps

Minimum Wire Ampacity: _____ Amps

Part Number: _____





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Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

Section 1

To the Installer

Water Connections (Water Cooled Units Only)

An adequate cold water supply must be provided with a hand shut-off valve. On the underside rear of the base pan, two 3/8" I.P.S. water connections for inlet and outlet have been provided for easy hook-up. 1/2" inside diameter water lines should be connected to the machine. (Flexible lines are recommended, if local codes permit.) Depending on local water conditions, it may be advisable to install a water strainer to prevent foreign substances from clogging the automatic water valve. There will be only one water "in" and one water "out" connection for both single head and double head units. **DO NOT** install a hand shut-off valve on the water "out" line! Water should always flow in this order: first, through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an **open trap drain**.

Air Cooled Units

Air cooled units require a minimum of 3" (7.6 cm) of clearance around **all** sides of the freezer to allow for adequate air flow across the condenser(s). Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

Note: An air deflector must be installed to direct the discharged air.

Electrical Connections

Each freezer requires one power supply for each data label. Check the data label on the freezer for fuse, wire ampacity and electrical specifications. Refer to the wiring diagram provided inside of the electrical box, for proper power connections.

This equipment is intended to be installed in accordance with the National Electrical Code (NEC), NFPA 70. The purpose of this code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!



CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!

Running Specifications

Expansion Valve Setting

404A/HP62: 20 to 22 PSI (138 to 152 kPa.) for normal products at temperatures of 18 to 20°F. (-7.8 to -6.7°C.).

Low Side Pressure

Low side pressure = expansion valve setting.

To adjust the low side pressure, place the gauge on the low side suction port at the compressor. With the compressor running, turn the adjustment knob of the automatic expansion valve clockwise to raise low side pressure and counterclockwise to lower pressure.

High Side Pressure

Air Cooled: The following chart indicates normal operating head pressures at various ambient temperatures:

Ambient Temperature		Normal Operating Head Pressures
F.	C.	PSI
70°	21.1°	240 - 270 (1,655 - 1,862 kPa.)
80°	26.7°	270 - 300 (1,862 - 2,069 kPa.)
90°	32.2°	300 - 340 (2,069 - 2,344 kPa.)
100°	37.8°	340 - 380 (2,344 - 2,620 kPa.)

Water Cooled: High side pressure for water cooled units is determined by the water valve. The water valve is factory set to maintain a high pressure of 235 PSI (1,620 kPa.). To adjust the high pressure, place the gauge on the high side access port. Turn the adjustment knob on the water valve clockwise to lower the high side pressure and counterclockwise to raise the pressure.

The high side pressure switch is factory set at 440 PSI (3,034kPa) for 404A/HP62. In the event of a water loss, this switch will sense a rise in pressure and deactivate the freezer.

Check Out

Once the unit is installed, it is advisable to check the following controls and mechanical operations of the freezer and to make any necessary adjustments. If applicable, repeat these checks for the second freezing cylinder on double head units.

Controls

Place the control switch in the "AUTO" position. The main refrigeration system will operate (compressor, beater motor, and the condenser fan). The dial light and the mix low indicator will be lit.



Figure 1

If the freezer is water cooled, the automatic water valve will begin to open and cold water will flow into the condenser. This will remove heat from the refrigerant. As the water flows into the open trap drain, it should be warm to the touch. Place the control switch in the "OFF" position.

Beater Rotation

Beater rotation must be clockwise as viewed looking into the freezing cylinder.

To correct rotation on a three-phase unit, interchange any two incoming power supply lines at the freezer main terminal block only.

To correct rotation on a single-phase unit, exchange leads inside the beater motor. (Follow the diagram printed on the motor.)

Electrical connections are made directly to the terminal block provided in the main control box located behind the service panel.

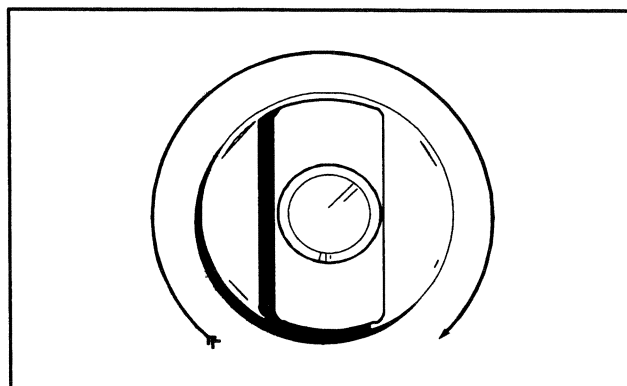


Figure 2

Note: Electrical connections should be performed by a trained service technician.

Gear Alignment

To prevent costly parts damage and to prevent excessive mix leakage, the gear unit must be perfectly aligned. To check gear alignment, insert the drive shaft through the rear shell bearing and into the gear unit. Move the drive shaft in and out of the gear unit, using all positions of the hex end. If any binding of the drive shaft occurs, the gear unit could be out of alignment.

Inspect the bolts which mount the gear unit. make sure they are tightened down.

To prevent excessive mix leakage, check the rear shell bearing. The locking tab should be folded over the nut to prevent the nut from working loose.

Section 2

Thermistor Control

Function

The thermistor control maintains temperature in the freezing cylinder by monitoring the resistance of the thermistor probe.

Specifications

Temperature Differential: cut in = 2°F. (1.1°C.) above cut-out.

Coarse Adjustment Range: 10° to 30°F. (-12° to -1°C.).

Fine Adjustment Range: 4°F. (2°C.) total.

Coarse Adjustment Potentiometer: 1/4 turn = approximately 6°F. (3°C.).

Input Voltage Supply: 24 VAC.

Thermistor Probe (Part # 038061-BLK)

The resistance value of the thermistor probe corresponds with the product temperature in the freezing cylinder. As the product becomes colder, the probe resistance increases. As the product becomes warmer, the probe resistance decreases.

Approximate probe resistance readings:

1. 10,000 ohms at room temperature (78°F. / 25°C.).
2. 46.012 ohms at product temperature (20°F. / -6.6°C.).

Operation

The thermistor probe is positioned in the bulb-well located at the front of the freezing cylinder. The thermistor control becomes operational when powered by the 24 VAC transformer.

When the desired product is achieved (control set-point) the thermistor control relay opens and discontinues the power sent to the compressor relay coil.

When the product in the freezing cylinder reaches 2°F. (1°C.) above the control set-point, the thermistor relay closes, sending L1 power to the compressor relay coil. The refrigeration system will run until the control set-point is achieved.

Anticipator

The anticipator signals the thermistor control to activate the refrigeration system whenever product is drawn. As the draw valve is raised (freezer draw switch closes), continuity is created between the thermistor control anticipator terminals. The thermistor control relay will close within 1 second to start the refrigeration system.

Upon completing the draw, the thermistor control recognizes the loss of continuity between the anticipator terminals, but will continue refrigeration for at least 25 seconds. This allows for additional blending and freezing of the warmer mix which has entered the freezing cylinder. After approximately 25 seconds have elapsed, the thermistor control returns to normal operation and cycles off the refrigeration system when the set-point temperature is achieved.

Setting Temperature

1. Position the thermistor fine adjustment at mid-range. This will limit the fine adjustment temperature range to $\pm 2^{\circ}\text{F}$. ($\pm 1^{\circ}\text{C}$).
2. Turn the coarse adjustment clockwise to the coldest setting.
3. With the freezer correctly primed, place the control switch in the "AUTO" position.
4. After the appropriate freezing time, test the product temperature. When a sample portion temperature is approximately 1° above the desired temperature setting, slowly turn the coarse adjustment counterclockwise (warmer) until the refrigeration system cycles off.
5. Allow the refrigeration system to cycle through at least two "off" cycles. After the unit cycles off, draw a sample of product and check the temperature. Readjust the coarse adjustment as required, but make only small adjustments.

Note: The anticipator automatically activates the refrigeration system 0 - 1 second after the draw valve is opened. If several small samples are drawn, the temperature may drift lower. To accurately set the control, let the product temperature stabilize by allowing the thermistor control to cycle the freezer on and off by the control set point instead of the anticipator.

Service Tips

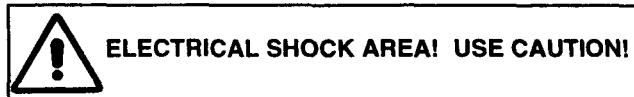
If a problem arises with the thermistor control assembly, identify and replace only the faulty component. For example, if the probe is defective, replace only the probe.

A varistor must be connected to the thermistor control's 24 VAC terminals in order to protect the control from voltage spikes (varistor part number X31547).

Fill the bulb-well with automotive antifreeze before installing the thermistor probe, and be sure the probe is installed completely into the bottom of the bulb-well.

Note: Lower the probe to the point where the wires extend from the probe and a resistance is felt. This indicates the probe is installed completely in the bottom of the bulb-well.

If the thermistor relay which *starts* the compressor will not close, check the following items:



1. Make sure power is being supplied to the freezer and that all operating switches are in the correct position.
2. Using a voltmeter, check the voltage supply to the thermistor control. The control requires 24 volts to operate.
3. Using an ohmmeter, check probe resistance. (Refer to the thermistor curve chart on page 5 for proper readings.)

If the thermistor relay which *deactivates* the compressor will not open, check the following items:



1. Make sure the thermistor relay opens when the freezer control switch is in the "OFF" position.
2. Make sure the thermistor probe is connected to the correct probe terminals.
3. Using an ohmmeter, check the thermistor probe for proper resistance. (Refer to the thermistor curve chart on page 5 for proper readings.)
4. Disconnect one wire to an anticipator terminal. If the thermistor relay opens after approximately 25 seconds, the problem is in the anticipator wiring circuit.

When problems such as erratic product quality occur, it is of utmost importance to determine if the thermistor components are defective before replacing them.

See page 31 for Troubleshooting Thermistor Components.

Thermistor Curve Chart

F.	C.	K OHM	F.	C.	K OHM	F.	C.	K OHM
-10	-23.3	118.201	22	-5.5	43.530	54	12.2	17.915
-9	-22.7	114.394	23	-5.0	42.340	55	12.7	17.451
-8	-22.2	110.709	24	-4.4	41.136	56	13.3	16.998
-7	-21.6	107.143	25	-3.8	39.967	57	13.8	16.557
-6	-21.1	103.692	26	-3.3	38.830	58	14.4	16.128
-5	-20.5	100.352	27	-2.7	37.727	59	15.0	15.710
-4	-20.0	97.120	28	-2.2	36.654	60	15.5	15.315
-3	-19.4	94.085	29	-1.6	35.612	61	16.1	14.929
-2	-18.8	91.144	30	-1.1	34.599	62	16.6	14.554
-1	-18.3	88.296	31	-0.5	33.616	63	17.2	14.187
0	-17.7	85.536	32	0	32.660	64	17.7	13.830
1	-17.2	82.863	33	0.5	31.760	65	18.3	13.482
2	-16.6	80.273	34	1.1	30.885	66	18.8	13.143
3	-16.1	77.765	35	1.6	30.035	67	19.4	12.812
4	-15.5	75.334	36	2.2	29.207	68	20.0	12.490
5	-15.0	72.980	37	2.7	28.403	69	20.5	12.185
6	-14.4	70.627	38	3.3	27.620	70	21.1	11.888
7	-13.8	68.350	39	3.8	26.859	71	21.6	11.598
8	-13.3	66.147	40	4.4	26.120	72	22.2	11.315
9	-12.7	64.014	41	5.0	25.400	73	22.7	11.039
10	-12.2	61.951	42	5.5	24.721	74	23.3	10.769
11	-11.6	59.953	43	6.1	24.059	75	23.8	10.507
12	-11.1	58.021	44	6.6	23.416	76	24.4	10.250
13	-10.5	56.150	45	7.2	22.789	77	25.0	10.000
14	-10.0	54.340	46	7.7	22.180	78	25.5	9.763
15	-9.4	52.854	47	8.3	21.586	79	26.1	9.532
16	-8.8	51.409	48	8.8	21.009	80	26.6	9.306
17	-8.3	50.003	49	9.4	20.447	81	27.2	9.085
18	-7.7	48.636	50	10.0	19.900	82	27.7	8.870
19	-7.2	47.306	51	10.5	19.384	83	28.3	8.659
20	-6.6	46.012	52	11.1	18.881	84	28.8	8.454
21	-6.1	44.754	53	11.6	18.392	85	29.4	8.254

When checking a thermistor probe, first determine the temperature at the probe and find it on this chart, along with the correct ohmmeter reading. If your ohmmeter reading varies from the correct reading, determine whether the difference is acceptable. If a probe is faulty, the difference will be great.

Section 3

Semi-Assembled Navy Units

To disassemble and assemble the Model 702 unit for installation in a Navy submarine, perform the following steps. Use the illustrations on page 10 for the numerical references.

Disassembly

Step 1

Remove the rear panel, both side panels, and the control box cover.

Step 2

Recover refrigerants HP62 and 134A (22).



WARNING: This step must be performed by a certified refrigeration technician.

Step 3

Remove the drip pan, the door assembly, the beater assembly and the beater shaft.

Step 4

Remove the decorative plate (2) from the front of the unit.

Step 5

Remove the fasteners from the transformer, the draw switch, the thermistor board, and the hopper temperature control.

Step 6

Disconnect the mix low light assembly (1).

Step 7

Remove the thermistor probe and the mix hopper temperature control probe from their respective bulb locations.

Step 8

Disconnect the beater motor wires (3) at the control box. (Follow the wiring diagram.)

Step 9

Remove the fan wires from the control box (15).

Step 10

Remove the Danfoss fan wires (12) from the control box.

Step 11

Disconnect the control channel (18) wires from the control box.

Step 12

Remove the white and white with black stripe wires from the Danfoss compressor. Disconnect these wires from the control box.

Step 13

Disconnect the high pressure cut-out (HPCO) wires from the control box.

Step 14

Disconnect the capacitor relay box assembly wires (25) from the control box.

Note: On a unit with a transformer, disconnect the power wires for the compressor and the transformer at the control box.

Step 15

Disconnect the mix low probe wire.

Note: Remove all valve cores from the access valve bodies (26) before attempting to unsolder copper components. This will discharge any pressure that might still be in the system.

Step 16

Unsolder the suction line assembly from both the main compressor and from the shell assembly (14). (Plug when cool.)

Step 17

Unsolder the discharge line assembly from both the main compressor (13) and the condenser. (Plug when cool.)

Step 18

Unsolder the liquid line from both the filter dryer and the bottom of the condenser (21). (Plug when cool.)

Step 19

Remove the refrigeration lines (4) from the Danfoss compressor. (Plug when cool.)

Step 20

Remove the liquid line (10) from the Danfoss filter dryer. (Plug when cool.)

Step 21

Unsolder both refrigeration lines on the Danfoss compressor (4). (Plug when cool.)

Step 22

Remove the condenser (22).

Step 23

Remove the fan blade (23) from the fan motor.

Step 24

Remove the control box assembly (15).

Step 25

Remove the 4 screws holding the Danfoss compressor support plate (19).

Note: Both the compressor and plate can be removed together.

Step 26

Remove the Danfoss condenser assembly (12).

Step 27

Remove the pulley belts (7).

Step 28

Using a drill, remove all 8 hood rivets (16).

Step 29

Remove the fasteners (27) which secure the gear box to the frame.

Step 30

Remove the two carriage bolts and the nuts that secure the front of the shell.

Step 31

Remove the fasteners that secure the upper side panels to the rear corner trim (17).

Step 32

Remove the shell and hood assembly as one piece (20).

Step 33

Remove the upper side panels from the front panel assembly.

Step 34

Remove the rear corner trim (8) from the frame.

Step 35

Remove the drip pan guide assembly (5) from both the front panel assembly and from the rear shell support.

Step 36

Remove the front panel assembly (6).

Step 37

Remove the fasteners (11) which connect the top of the frame to the bottom of the frame.

Assembly

Step 1

Mount the upper frame on the lower frame.

Step 2

Install the front panel assembly.

Step 3

Connect the drip pan guide assembly to both the front panel assembly and to the rear shell support.

Step 4

Install the rear corner trim and secure in place.

Step 5

Install the shell and hood assembly.

Step 6

Install the carriage bolts through the front panel assembly, and place the nuts on the bolts to secure the shell.

Step 7

Install the fasteners in place which secure the gear box to the rear shell support.

Step 8

Tighten the nuts on the carriage bolts, then tighten the screws that secure the gear box.

Step 9

Using silicone, seal around the nose cone that protrudes through the front panel assembly.

Step 10

Mount the fan blade (23).

Step 11

Mount the condenser (22). Ensure that the fan blade turns freely.

Step 12

Resolder the suction line assembly to both the shell assembly and to the main compressor.

Step 13

Resolder the discharge line assembly to both the condenser and the main compressor.

Step 14

Resolder the liquid line to both the condenser and the filter dryer.

Step 15

Install the valve cores into the high side access valve and into the low side access valve for the main system.

Step 16

Using a set of gauges, install the hoses to the high and low sides accordingly. Connect the center hose to a vacuum pump and start the pump.

Step 17

Install the pulley belts.

Step 18

Install the Danfoss condenser assembly, and solder the Danfoss filter dryer to the liquid line.

Step 19

Install the Danfoss compressor and the mounting plate.

Step 20

Install the Danfoss suction line assembly to the Danfoss compressor. Solder both the Danfoss suction line assembly and the Danfoss condenser discharge line to the Danfoss compressor.

Step 21

Install the valve cores into the low side access valve on the Danfoss compressor and into the EPR valve.

Step 22

Connect the wires from the Danfoss condenser assembly to the Danfoss compressor accordingly.

Step 23

Install the control box assembly.

Step 24

Connect the control channel wires to the control box.

Step 25

Connect the following wires to the control box:

- beater motor
- fan motor
- HPCO
- Danfoss condenser
- compressor wires

Note: On (-12) capacitor relay box wires
On (-63) transformer wires and compressor wires

Step 26

Replace the fasteners on the components behind the dec plate (1).

Step 27

Replace the hopper temperature control probe.

Step 28

Replace thermistor probe.

Note: If any antifreeze leaks from the barrel bulb well, add more antifreeze into the bulb well before replacing the thermistor probe.

Step 29

If the main system is far enough down into a vacuum, remove the vacuum pump from the main system and put it onto the Danfoss system.

Step 30

Recharge the main system.

Step 31

Replace the beater shaft, the beater assembly, and the door assembly.

Step 32

Wire all components according to the wiring diagram.

Step 33

Once the Danfoss system is down far enough into a vacuum, remove the vacuum pump and recharge the Danfoss system.

Step 34

Connect the power cord.

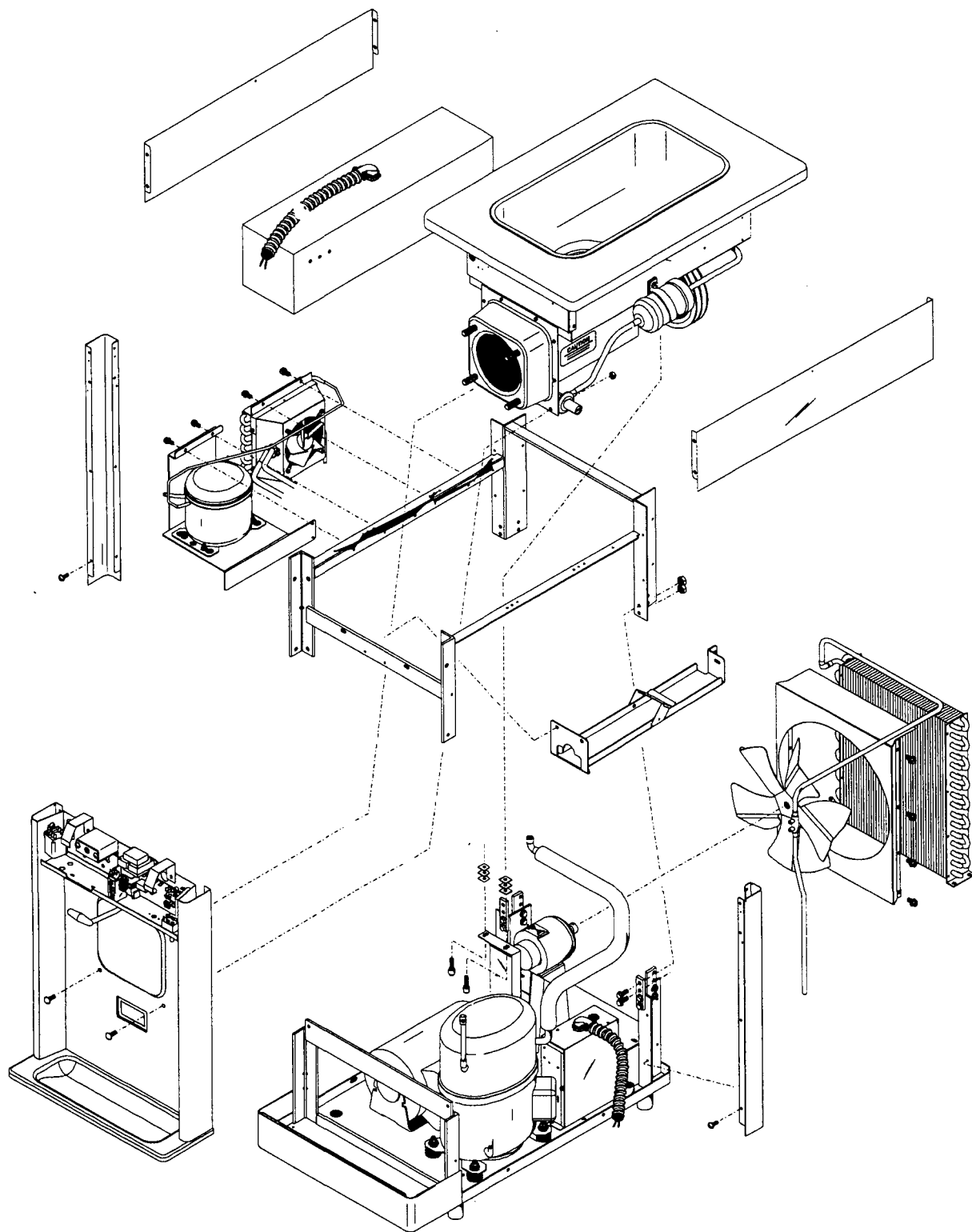
Step 35

Replace the control box cover.

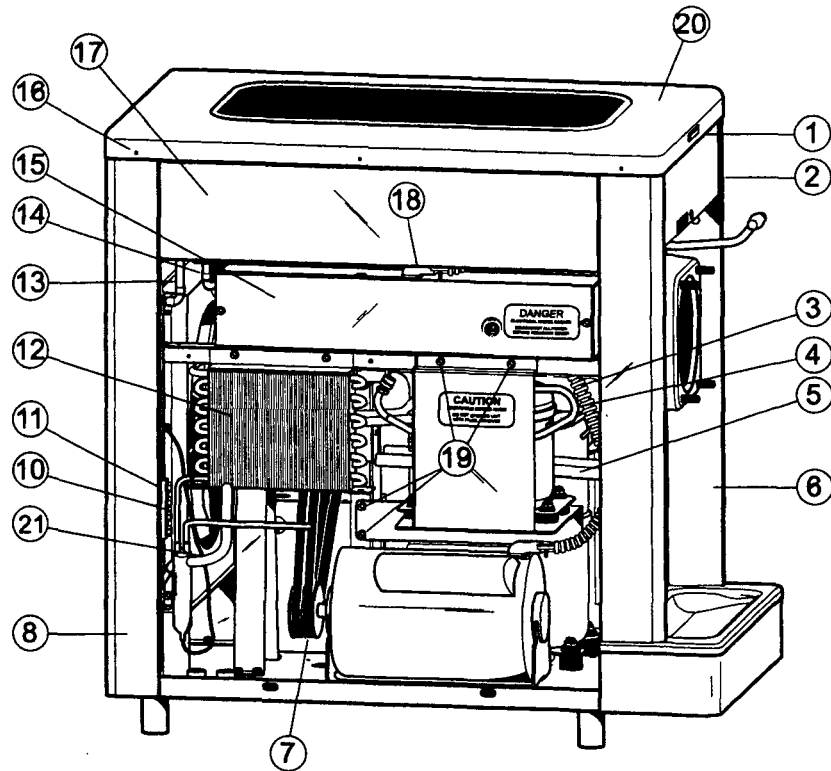
Step 36

Replace all panels.

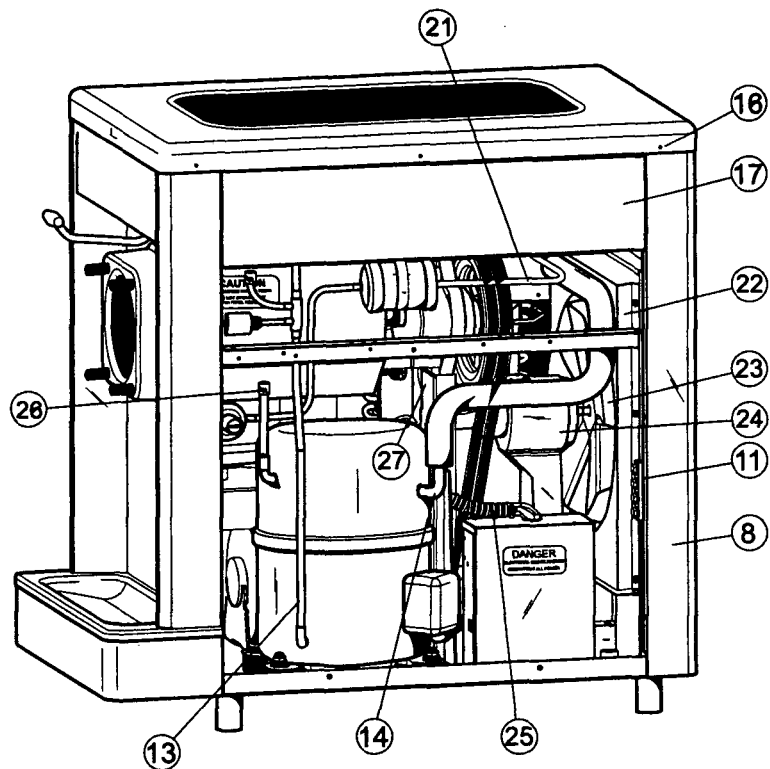
Semi-Assembled Model 702 Exploded View



Left Side View



Right Side View



Section 4

To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor freezer, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, this machine will require cleaning and maintenance. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.

This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your Taylor freezer will NOT eventually compensate and correct for any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that all personnel responsible for the equipment's operation review these procedures in order to be properly trained and to make sure that there is no confusion.

In the event that you should require technical assistance, please contact your local authorized Taylor Distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, **only the refrigerant specified on the affixed data label should be used.** The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms.

The Taylor Company will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

Section 5

Safety

We at Taylor Company are concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. Taylor has gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician. As an example, warning labels have been attached to the freezer to further point out safety precautions to the operator.

IMPORTANT – Failure to adhere to the following safety precautions may result in severe personal injury or death. Failure to comply with these warnings may damage the machine and its components. Component damage will result in part replacement expense and service repair expense.

To Operate Safely:



DO NOT operate the freezer without reading this operator's manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.



DO NOT operate the freezer unless it is properly grounded. Failure to follow this instruction may result in electrocution.



DO NOT allow untrained personnel to operate this machine. Failure to follow this instruction may result in severe personal injury to fingers or hands from hazardous moving parts.



DO NOT attempt any repairs unless the main power supply to the freezer has been disconnected. Failure to follow this instruction may result in electrocution. Contact your local authorized Taylor Distributor for service.



DO NOT operate the freezer with larger fuses than specified on the freezer data label. Failure to follow this instruction may result in electrocution or damage to the machine. Consult your electrician.



DO NOT operate the freezer unless all service panels and access doors are restrained with screws. Failure to follow this instruction may result in severe personal injury from hazardous moving parts.

DO NOT obstruct air intake and discharge openings:

Counter Model: 6" (15.2 cm) minimum air space on sides and rear, and 4-1/4" (10.8 cm) on bottom.

Console Model: 6" (15.2 cm) minimum air space on sides and rear, and 7-1/2" (19.1 cm) minimum on bottom. Failure to follow this instruction may cause poor freezer performance and damage to the machine.



DO NOT put objects or fingers in door spout. Failure to follow this instruction may result in contaminated product or personal injury from blade contact.



DO NOT remove the door, beater, scraper blades, or drive shaft unless the control switch is in the "OFF" position. Failure to follow this instruction may result in severe personal injury from hazardous moving parts.



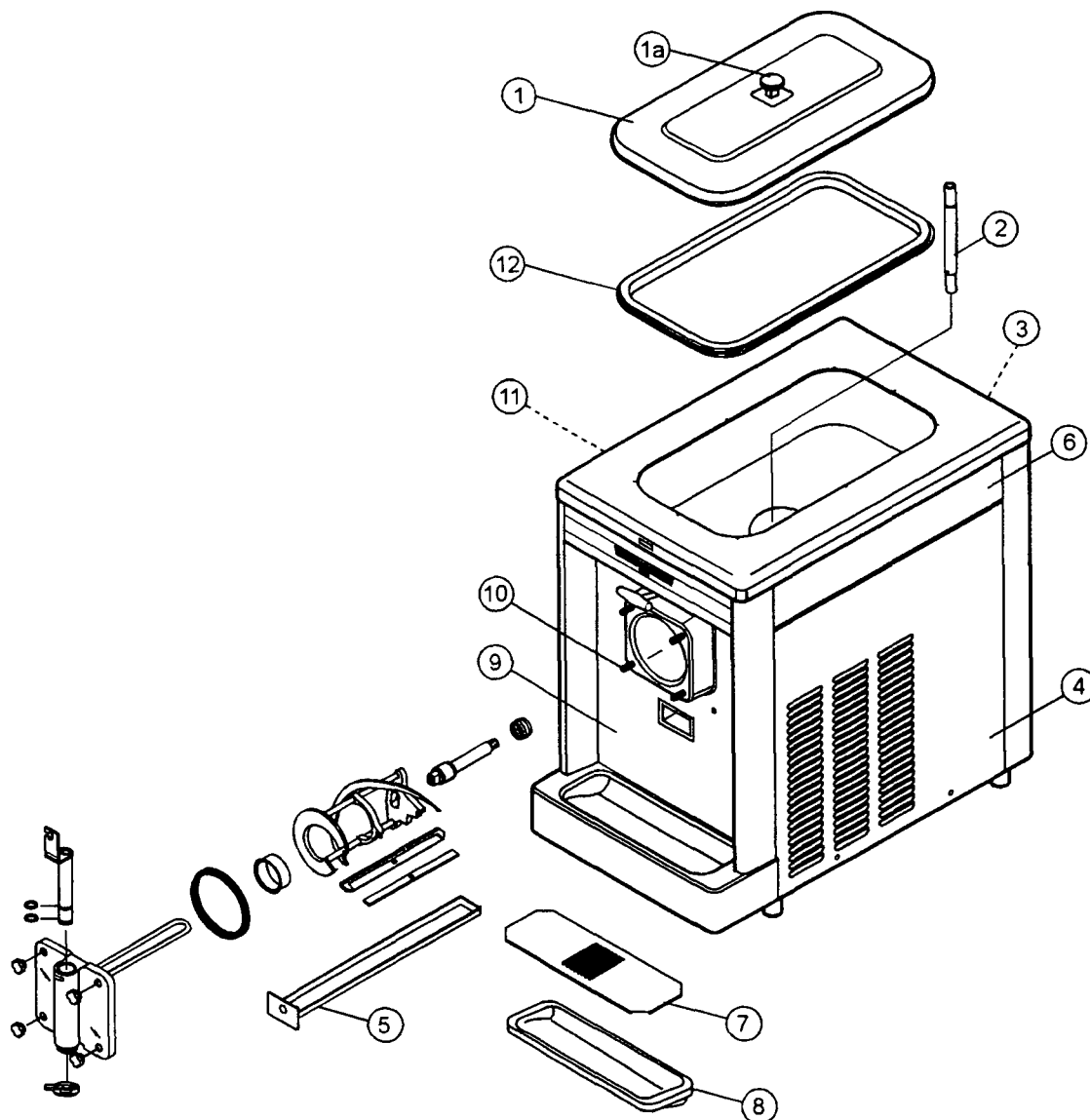
USE EXTREME CAUTION when removing the beater assembly. The scraper blades are very sharp and may cause injury.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

Section 6

Operator Parts Identification

Model 702

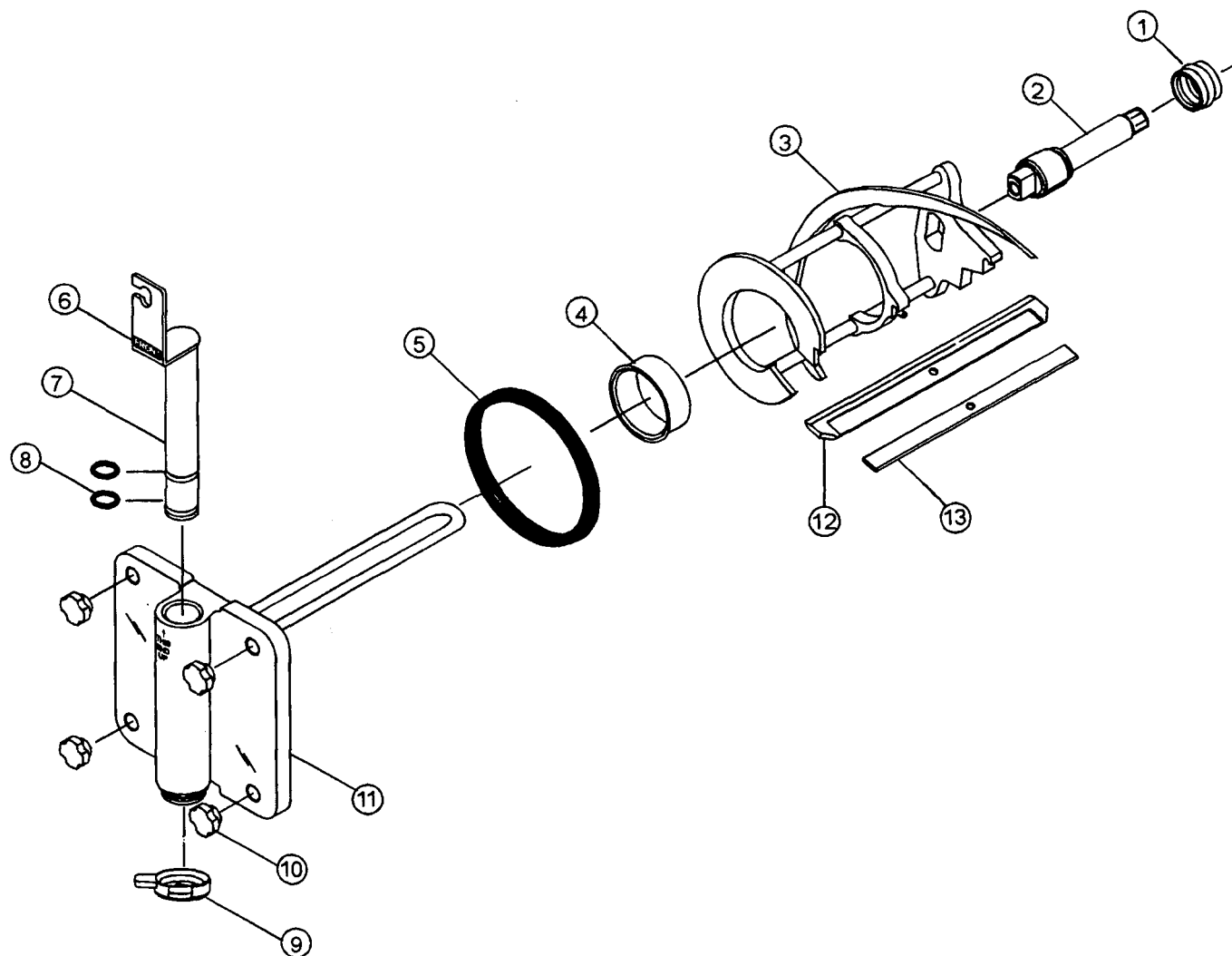


Item	Description	Part No.
1	*Cover A.-Hopper (115V-60-1 only)	X39291
	Cover A.-Hopper-Std. (460-60-3)	X38458
1a	Knob-Hopper Cover	025429
2	Tube-Feed-SS-5/32 Hole	028967-2
3	Panel-Rear 702 Navy	050929
4	Panel-Side 702 Right	050928
5	Pan-Drip 13-1/4 Long	039027

Item	Description	Part No.
6	Panel-Side 5472 HT Upper	042317
7	Shield-Splash 15" L x 5-13/32	022763
8	Tray-Drip 14-7/8 L x 5-1/8 SG	013690
9	Panel A.-Front	X50930
10	Stud-Nose Cone	022822
11	Panel A.-Side Left	X50940
12	Gasket-Hopper (460-60-3)	038375

*Insulated hopper cover that requires no gasket.

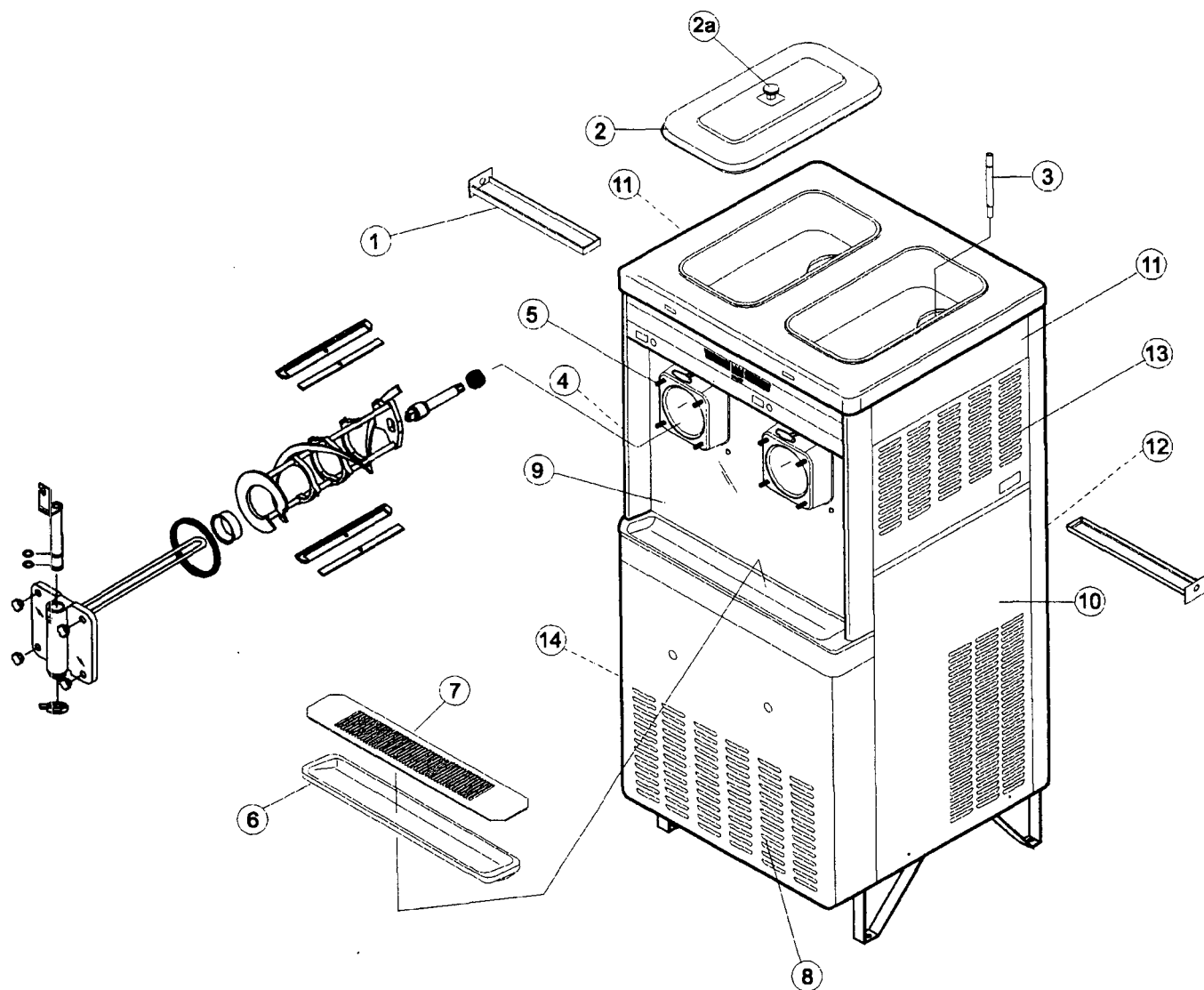
Model 702 Door Assembly



Item	Description	Part No.
1	Seal-Drive Shaft	032560
2	Shaft-Beater	033498
3	Beater A.-4 Qt.-1 Pin Support	X49490
4	Bearing-Front	013116
5	Gasket-Door 5.177 ID x 5.9380	016672
6	Decal-Lift Plate Front	015200
7	Valve A.-Draw	X13624-SP

Item	Description	Part No.
8	O-Ring - 1-1/16 OD x .139 W	020571
9	Cap-Design- 1.188" ID 6 Point	013139-6
10	Nut-Stud	021508
11	Door A.-1 Spout-4 Qt.	X30269-SER
12	Blade-Scraper-Plastic	046237
13	Clip-Scraper Blade 8.75 Inch	046238

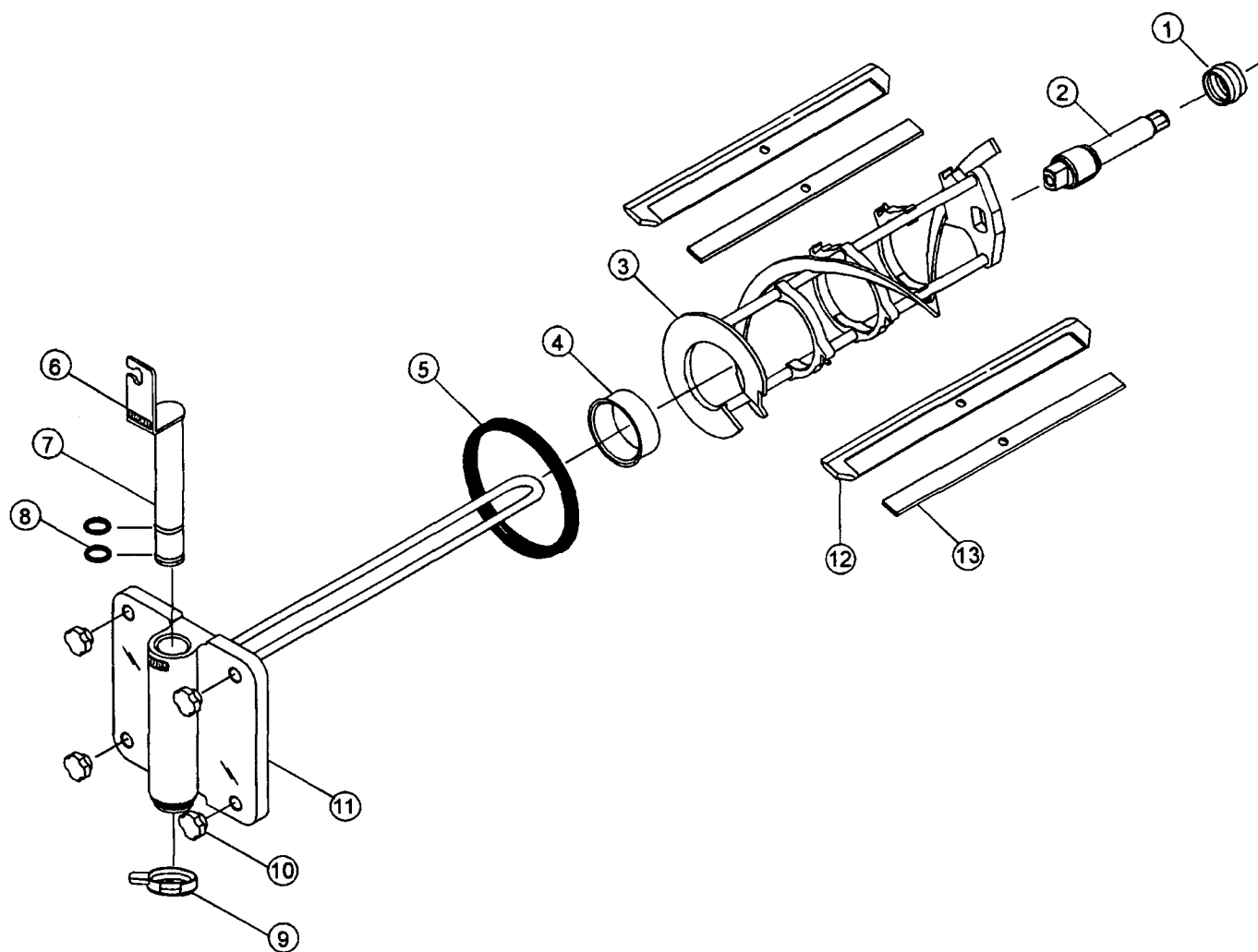
Model 772



Item	Description	Part No.
1	Pan-Drip 11-5/8 Long	027503
2	Cover A.-Hopper-Insulated	X39291
2a	Knob-Hopper Cover	025429
3	Tube-Feed-SS	028967-3
4	Panel-Upper Side Left	029981
5	Stud-Nose Cone	022822
6	Tray-Drip	029998
7	Shield-Splash	029997

Item	Description	Part No.
8	Panel-Service	029976
9	Panel A.-Front	X50835
10	Panel A.-Side Lower Right	X44855
11	Panel-Side Top L-R	029978
12	Panel-Rear	029996
13	Panel-Upper Side Right	029980
14	Panel A.-Side Lower Left	X44853

Model 772 Door Assembly



Item	Description	Part No.
1	Seal-Drive Shaft	032560
2	Shaft-Beater	033498
3	Beater A.-7 Qt.-1 Pin Support	X46233
4	Bearing-Front	013116
5	Gasket-Door 5.177 ID x 5.9380	016672
6	Decal-Lift Plate Front	015200
7	Valve A.-Draw	X13624-SP

Item	Description	Part No.
8	O-Ring 1-1/16 OD x .139 W	020571
9	Cap-Design 1.188" ID 6 Point	013139-6
10	Nut-Stud	021508
11	Door A.-1 Spout 7 Qt.	X30272-SER
12	Blade-Scraper-Plastic	046237
13	Clip-Scraper Blade - 8.75 Inch	046238

Section 7

Important: To the Operator

Indicator Light “Mix Low”

The Models 702 and 772 are equipped with a “MIX LOW” light located on the front of the machine. When the light begins to flash, it indicates that the mix hopper has a low supply of mix. At this time, the hopper should be filled with mix. If you neglect to add mix when the light begins to flash, eventual damage to the beater, blades, drive shaft, and freezer door may occur.

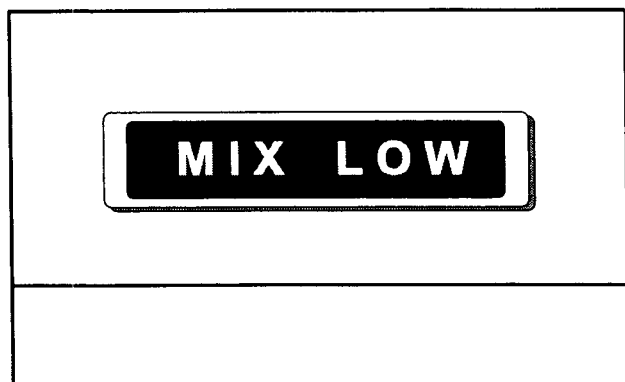


Figure 3

Symbol Definitions

The following chart identifies the symbol definitions used on the operator switches.



= The “WASH” keypad.



= The “OFF” keypad.



= The “ON/AUTO” keypad.

Control Switch

The center position is “OFF”. The **right** position is “AUTO”, which activates the beater motor and the refrigeration system. The **left** position is “WASH” which activates the beater motor only.

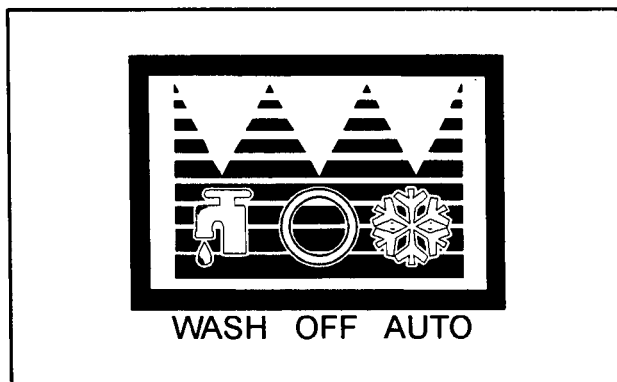


Figure 4

Reset Button

On a Model 702, the reset button is located under the left upper side panel. On the Model 772, the reset button is located on the lower front panel.

The reset button protects the beater motor from an overload condition. If an overload occurs, the reset mechanism will trip. To properly reset the freezer, place the control switch in the “OFF” position. Press the reset button firmly. Place the control switch in the “WASH” position and observe the freezer’s performance. Once satisfied, place the control switch back in the “AUTO” position.

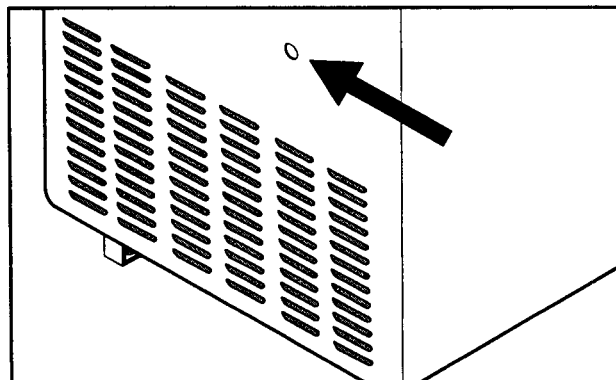


Figure 5



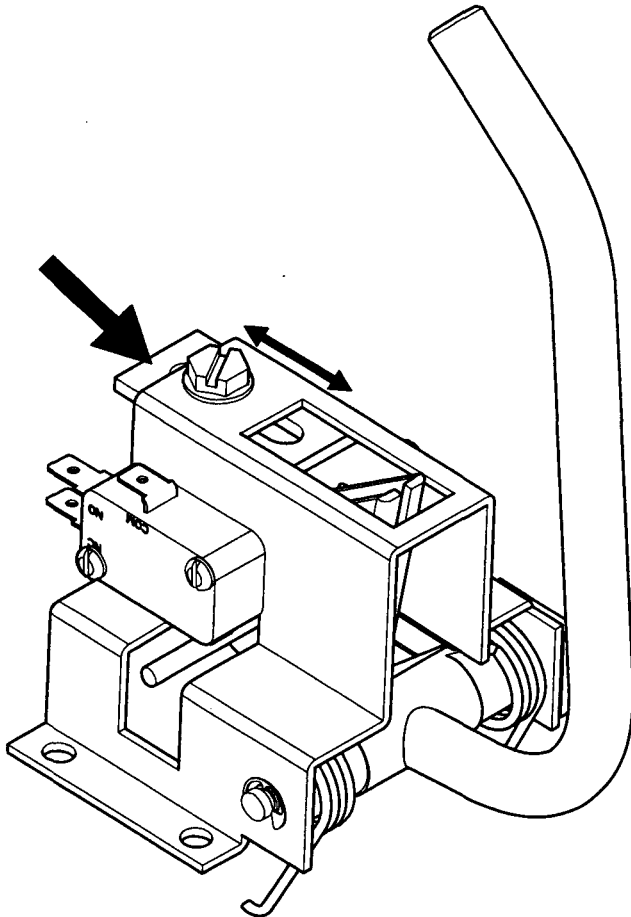
IMPORTANT: Do not use metal objects to press the reset button.

Thermistor Control

The viscosity (thickness) of the product is controlled by a temperature sensing device called the thermistor. To achieve a thicker product, turn the control **clockwise**, and turn the control **counterclockwise** to achieve a thinner product. Allow the refrigeration system to cycle on and off 2 or 3 times before an accurate consistency can be evaluated.

Draw Rate

The draw rate can be adjusted by raising and lowering the draw switch bracket. A technician should perform this task, and set the rate at 5 to 7.5 ounces of product per 10 seconds.



Optional Features

Separate Hopper Refrigeration System (SHR)

“Standby”

The Separate Hopper Refrigeration System (SHR) and the Cylinder Temperature Retention System (CTR) are **standard features**. This feature is referred to as “STANDBY”. The SHR incorporates the use of a separate small refrigeration system to maintain the mix temperature in the hopper to below 40°F. (4.4°C.) This assures bacteria control. The CTR works with the SHR to maintain a good quality product. During long “No Sale” periods, it becomes necessary to warm the product in the freezing cylinder to approximately 35°F. to 40°F. (1.7°C. to 4.4°C.) to prevent overheating and product breakdown.

Note: Some local health codes do not permit the use of “STANDBY”.



ALWAYS FOLLOW LOCAL HEALTH CODES.



IMPORTANT: Make sure your hands are sanitized before performing these instructions:

To activate SHR and CTR, place the air tube (end without the hole) into the mix inlet hole.

Place the control switch in the “AUTO” position, and turn the STANDBY switch to the “ON” position. The unit will operate as a refrigerator for product in the hopper and freezing cylinder.

To remove the unit from the “STANDBY” mode, place the control switch in the “AUTO” position, and turn the standby switch to the “OFF” position. The unit will resume the normal operating mode.

When the unit cycles off, remove the hopper cover, and place the feed tube in its original position.

Replace the hopper cover.



IMPORTANT: The “STANDBY” mode should *not* be used in lieu of daily disassembly, cleaning, and sanitizing. Follow your local health codes regarding this issue.

Section 8

Operating Procedures

The Model 702 has been selected to show you the pictured step-by-step operating procedures for both models contained in this manual. These two models, for practical purposes of operation, are the same.

They both store 20 quarts (18.9 liters) of mix in the hopper. The mix then flows **by gravity** through a mix feed tube down into the freezing cylinder.

Locate your model number below to determine the characteristics of your freezer:

702: (1) 4 quart (3.8 liter) freezing cylinder.

772: (2) 7 quart (6.6 liter) freezing cylinders.

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's cleaning.

The following procedures will show you how to assemble the parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first portion.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to page 24, "Disassembly" and start there.

Assembly



MAKE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION TO ELIMINATE THE CHANCE OF MOVING PARTS.

Note: When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).

Step 1

Install the drive shaft. Lubricate the groove and shaft portion that comes in contact with the bearing on the beater drive shaft. Slide the seal over the shaft and groove until it fits into place. **DO NOT** lubricate the hex end of the drive shaft. Fill the inside portion of the seal with 1/4" more lubricant and evenly lubricate the flat side of the seal that comes in contact with the bearing.

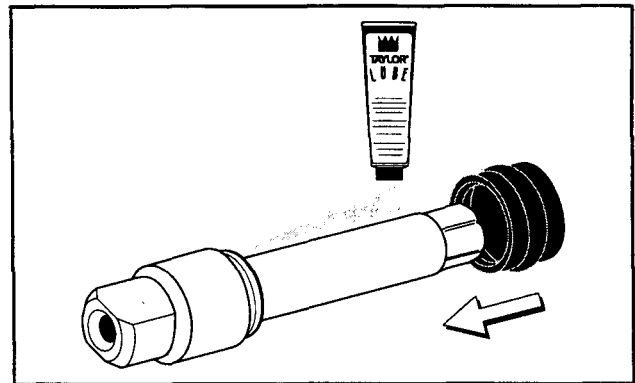


Figure 6

Insert the drive shaft through the rear shell bearing in the freezing cylinder and engage the hex end firmly into the gear box coupling.

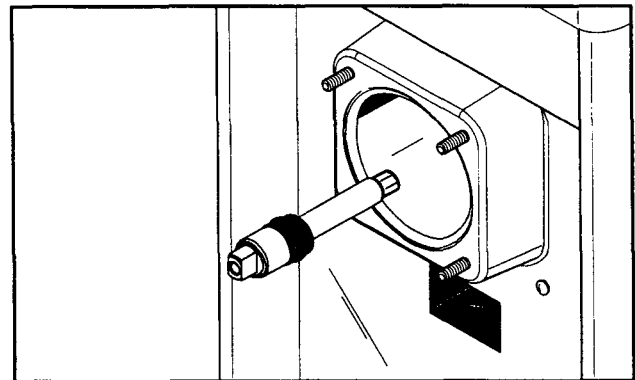


Figure 7

Step 2

Install the beater assembly. First check the scraper blade(s) for any nicks or signs of wear. If any nicks are present, replace the blade(s).

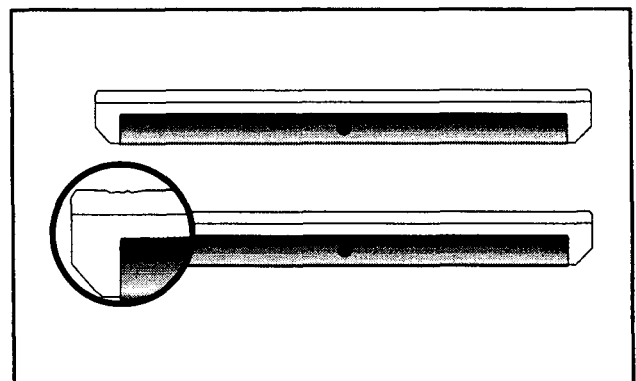


Figure 8

Note: To prevent costly damage, the hole in the scraper blade must fit securely over the pin.

If the blades are in good condition, place the rear scraper blade over the rear holding pin on the beater, knife edge to the outside. Holding the rear blade on the beater, slide the assembly halfway into the freezing cylinder. Install the front scraper blade over the front holding pin. Slide the beater assembly the rest of the way into the freezing cylinder.

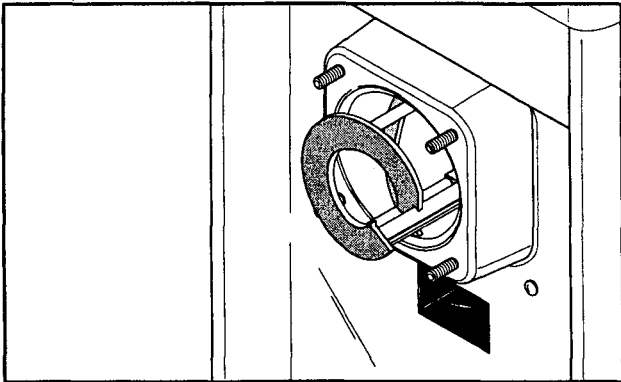


Figure 9

Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater is properly seated. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 3

Install the draw valve. Slide the two o-rings into the grooves on the draw valve and lubricate them with Taylor Lube.

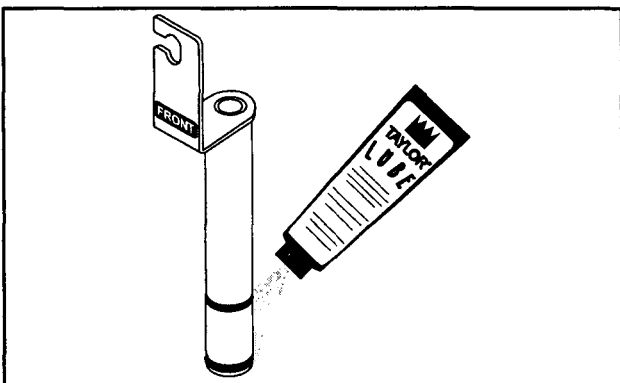


Figure 10

Lubricate the inside of the freezer door spout, top and bottom. Insert the draw valve into the freezer door from the **top**. It will be necessary to rotate the draw valve to the **left** when assembling the door to the freezer.

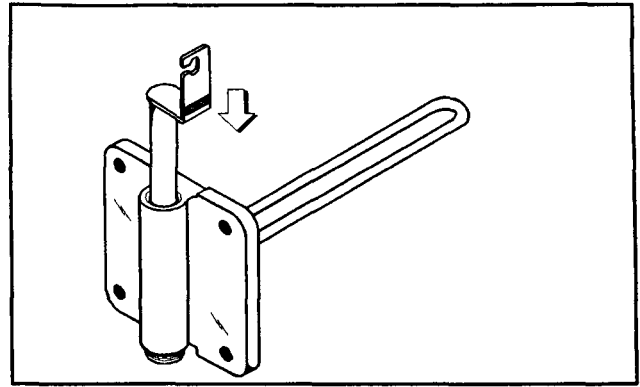


Figure 11

Step 4

Install the freezer door. Place the freezer door gasket into the groove on the back of the freezer door. Slide the front bearing over the baffle rod so the flanged edge is against the door. **Do not lubricate the gasket or bearing.**

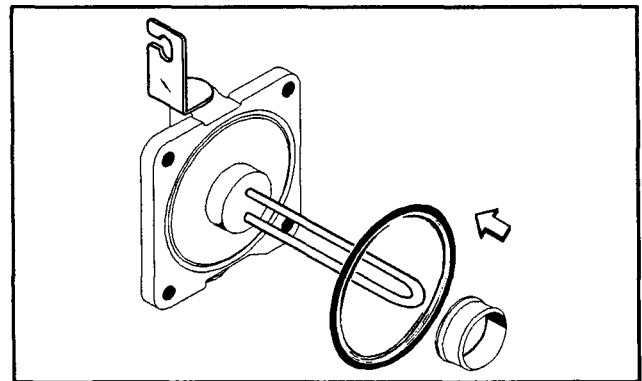


Figure 12

Insert the baffle rod through the beater in the freezing cylinder. With the door seated on the freezer studs, install the handscrews. Tighten equally in a crisscross pattern to insure that the door is snug.

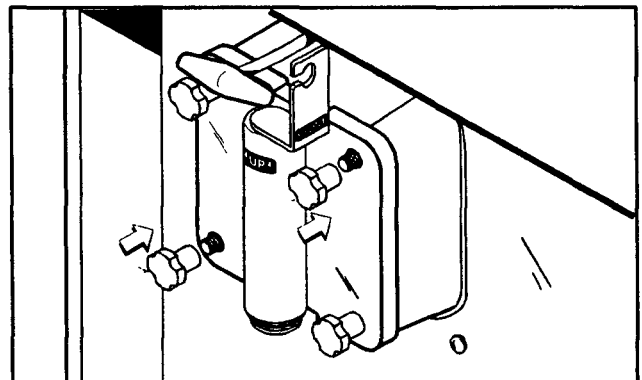


Figure 13

Rotate the draw valve bracket to the **left**. Center it into position by raising the draw arm and placing it into the slotted groove of the draw valve bracket.

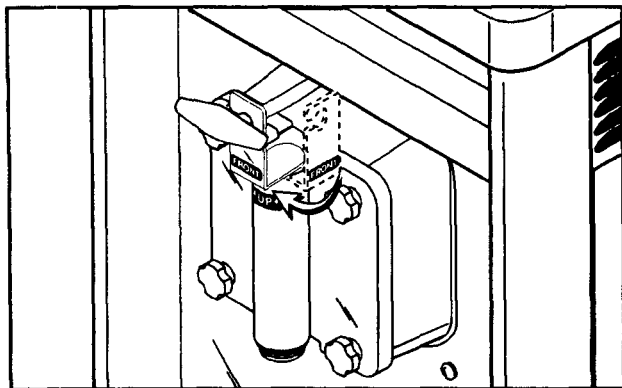


Figure 14

Step 5

Snap the design cap over the end of the door spout.

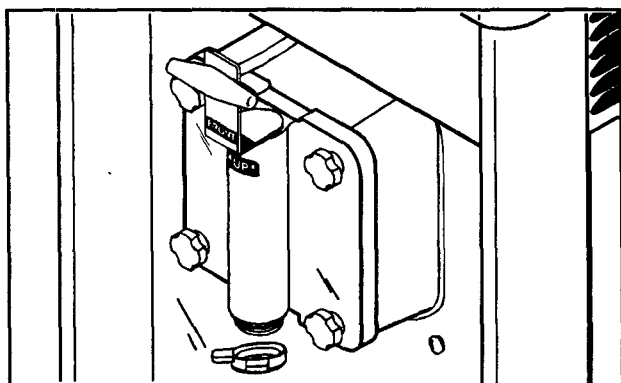


Figure 15

Step 6

Lay the mix feed tube in the bottom of the mix hopper.

Repeat Steps 1 through 6 for the other side of the freezer on the Model 772.

Step 7

Install the front drip tray and splash shield under the door spout(s).

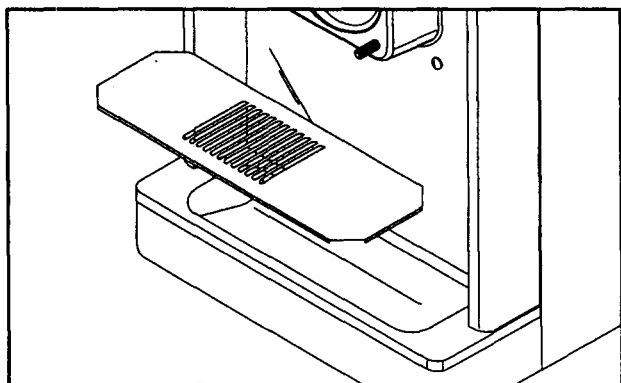


Figure 16

Step 8

Slide the rear drip pan into the hole(s) in the side panel.

Sanitizing

Step 1

Prepare two gallons (7.6 liters) of an approved 100 PPM sanitizing solution (example: Kay-5). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.**

Step 2

Pour the two gallons (7.6 liters) of sanitizing solution into the hopper and allow it to flow into the freezing cylinder.

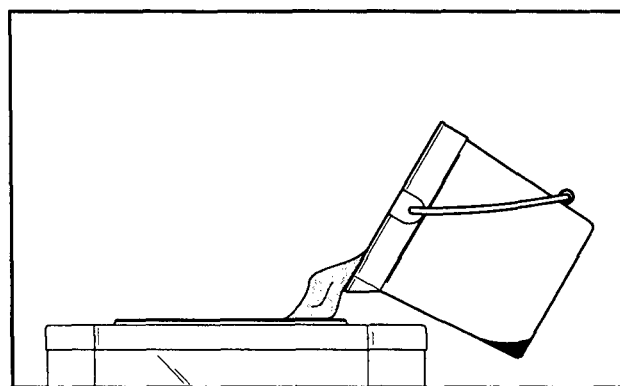


Figure 17

Step 3

While the solution is flowing into the freezing cylinder, brush clean the hopper. While cleaning the mix hopper, take particular care in brushing the mix level sensing probe on the rear wall of the hopper, the mix inlet hole, and the mix feed tube.

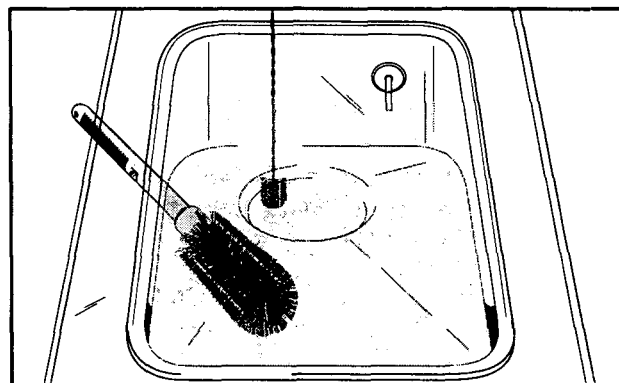


Figure 18

Step 4

Place the control switch in the "WASH" position. This will cause the sanitizing solution in the freezing cylinder to agitate. Allow the solution to agitate for five minutes.



Figure 19

Step 5

Place an empty pail beneath the door spout and raise the draw arm. Draw off all the sanitizing solution.

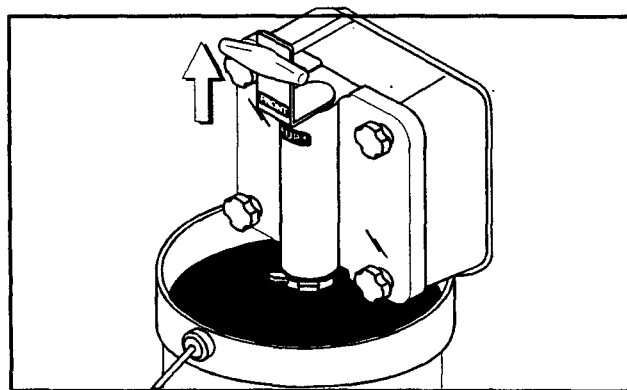


Figure 20

Step 6

When the sanitizer stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.



Note: You have just sanitized the freezer; therefore, **be sure your hands are sanitized** before continuing these instructions.

Step 7

Stand the mix feed tube in the corner of the mix hopper.

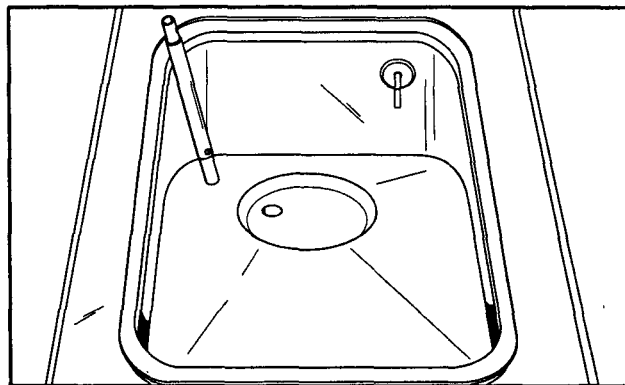


Figure 21

Repeat Steps 1 through 7 for the other side of the freezer on the Model 772.

Priming

Prime the machine as close to the time of first product draw as possible.

Step 1

Place a mix pail beneath the door spout and raise the draw arm. Pour two gallons (7.6 liters) of **fresh** mix into the hopper and allow it to flow down into the freezing cylinder. This will force out any remaining sanitizing solution. When full strength mix is flowing from the door spout, lower the draw arm.

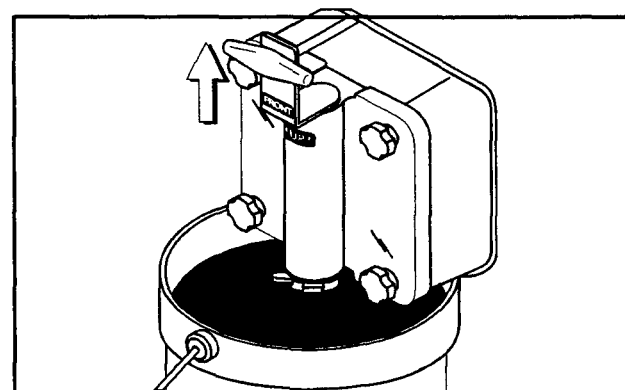


Figure 22

Step 2

When the mix has stopped bubbling down into the freezing cylinder, install the mix feed tube into the mix inlet hole.

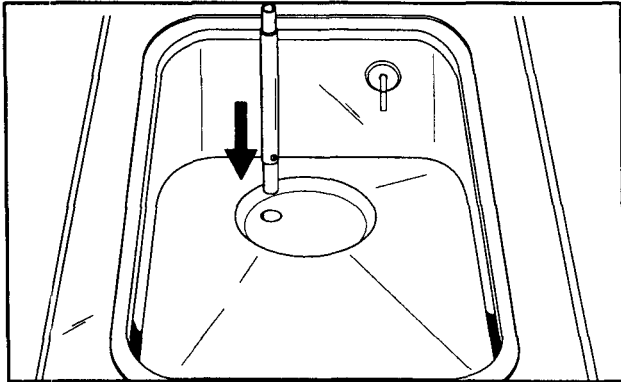


Figure 23

Step 3

Place the control switch in the "AUTO" position. When the unit cycles off, the product will be at serving temperature.

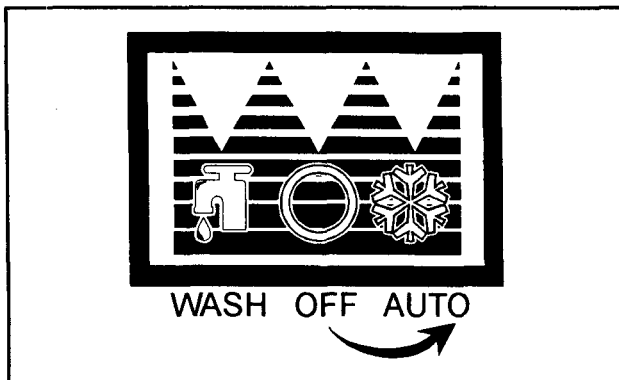


Figure 24

Step 4

Fill the hopper with mix. As the mix level comes in contact with the mix level sensing probe on the rear wall of the hopper, the "MIX LOW" light will extinguish.

Step 5

Place the mix hopper cover in position.

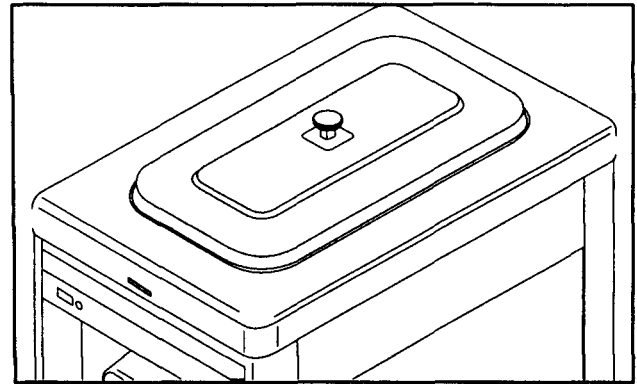


Figure 25

Repeat Steps 1 through 5 for the other side of the freezer on the Model 772.

Closing Procedure

To disassemble your unit, the following items will be needed:

- Two cleaning pails
- Sanitized stainless steel rerun can with lid
- Necessary brushes (provided with freezer)
- Cleaner
- Single service towels

Draining Product From the Freezing Cylinder

Step 1

Place the control switch in the "OFF" position.

Step 2

Remove the hopper cover and the mix feed tube. Take these parts to the sink for cleaning.

Step 3

With a sanitized pail under the door spout, place the control switch in the "WASH" position and raise the draw arm. When all the product stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position. If local health codes permit, empty the rerun into the sanitized rerun can. Cover the container and place it in the walk-in cooler.

Repeat these steps for the second freezing cylinder on the Model 772.



ALWAYS FOLLOW LOCAL HEALTH CODES.

Rinsing

Step 1

Pour two gallons (7.6 liters) of **cool**, clean water into the mix hopper. With the brushes provided, scrub the mix hopper, the mix inlet hole, and the mix level sensing probe.

Step 2

With a mix pail beneath the door spout, place the control switch in the "WASH" position and raise the draw arm. Drain all the rinse water from the freezing cylinder. When the rinse water stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Repeat this procedure until the rinse water being drawn from the freezing cylinder is **clear**.

Repeat these steps for the second freezing cylinder on the Model 772.

Cleaning

Step 1

Prepare two gallons (7.6 liters) of an approved cleaning solution (example: Kay-5). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.**

Step 2

Pour the two gallons (7.6 liters) of cleaning solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

While the solution is flowing into the freezing cylinder, brush clean the mix hopper, the mix inlet hole, and the mix level sensing probe.

Step 4

Place the control switch in the "WASH" position. This will cause the cleaning solution in the freezing cylinder to agitate.

Step 5

Place an empty mix pail beneath the door spout and raise the draw arm. Draw off all the cleaning solution. When the solution stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Repeat Steps 1 through 5 for the second freezing cylinder on the Model 772.

Disassembly

Note: Failure to remove parts, brush clean and then air dry these parts, will result in damage to the related parts.

Step 1



BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION TO ELIMINATE THE CHANCE OF MOVING PARTS.

Step 2

Remove the handscrews, the freezer door, the gasket, the front bearing, the beater, the scraper blade(s), and the drive shaft from the freezing cylinder. Take these parts to the sink for cleaning.

Step 3

Remove the rear drip pan from the front panel.

Note: If the drip pan is filled with an excessive amount of mix, it is an indication that the drive shaft seal should be replaced or was improperly lubricated.

Repeat these steps for the second freezing cylinder on the Model 772.

Step 4

Remove the front drip tray and the splash shield.

Brush Cleaning

Step 1

Prepare a sink with an approved cleaning solution (example: Kay-5). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS**

If an approved cleaner other than Kay-5 is used, dilute it according to the label instructions. **IMPORTANT:** Follow the label directions. Too **STRONG** of a solution can cause parts damage. Too **MILD** of a solution will not provide adequate cleaning. Make sure all brushes provided with the freezer are available for brush cleaning.

Step 2

Remove the seal(s) from the drive shaft(s).

Step 3

From the freezer door(s) remove:

- the gasket(s)
- the front bearing(s)
- the design cap(s)
- the draw valve(s)

Remove all o-rings.

Note: To remove o-rings, use a single service towel to grasp the o-ring. Apply pressure in an upward direction until the o-ring pops out of its groove. With the other hand, push the top of the o-ring forward. It will roll out of the groove and can be easily removed. If there is more than one o-ring to be removed, always remove the rear o-ring first. This will allow the o-ring to slide over the forward rings without falling into the open grooves.

Step 4

Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Take particular care to brush clean the draw valve core in the freezer door(s). Place all the cleaned parts on a clean dry surface to air dry overnight.

Step 5

Return to the freezer with a small amount of cleaning solution. With the black bristle brush, brush clean the rear shell bearing(s) at the back of the freezing cylinder(s).

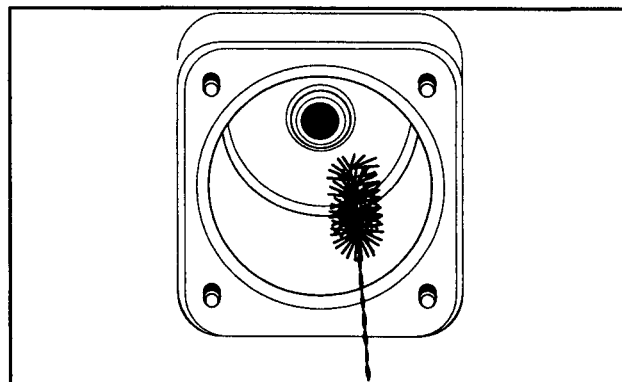


Figure 26

Step 6

Wipe clean all exterior surfaces of the freezer.

Section 9

Important: Operator Checklist

During Cleaning and Sanitizing



ALWAYS FOLLOW LOCAL HEALTH CODES.

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. The following check points should be stressed during the cleaning and sanitizing operations.

WE RECOMMEND DAILY CLEANING AND SANITIZING.

Troubleshooting Bacterial Count

- ☐ 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
- ☐ 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- ☐ 3. Use the white bristle brush to clean the mix inlet hole which extends from the mix hopper down to the rear of the freezing cylinder.
- ☐ 4. Use the black bristle brush to thoroughly clean the rear shell bearing located at the rear of the freezing cylinder. Be sure there is a generous amount of cleaning solution on the brush.
- ☐ 5. IF LOCAL HEALTH CODES PERMIT THE USE OF RERUN, make sure the mix rerun is stored in a sanitized, covered stainless steel container and is used the following day. DO NOT prime the machine with rerun. When using rerun, skim off the foam and discard, then mix the rerun with fresh mix in a ratio of 50/50 during the day's operation.
- ☐ 6. On a designated day of the week, run the mix as low as feasible and discard after closing. This will break the rerun cycle and reduce the possibility of high bacteria and coliform counts.
- ☐ 7. Properly prepare the cleaning and sanitizing solutions. Read and follow label directions

carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.

- ☐ 8. The temperature of the mix in the mix hopper and walk-in cooler should be below 40°F. (4.4°C.).

Regular Maintenance Checks

- ☐ 1. Rotate scraper blades to allow both sides of the knife edge to wear evenly. This will contribute to self-sharpening and help maintain fast, efficient freezing.
- ☐ 2. Replace scraper blades that are nicked, damaged or worn.
- ☐ 3. Before installing the beater, be certain that scraper blades are properly attached over the pins.
- ☐ 4. Check the rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- ☐ 5. Using a screwdriver and cloth towel, keep the rear shell bearing and the female hex drive socket clean and free of lubricant and mix deposits.
- ☐ 6. Dispose of o-rings and seals if they are worn, torn, or fit too loosely, and replace with new ones.
- ☐ 7. Follow all lubricating procedures as outlined in "Assembly".
- ☐ 8. Check the condensers for accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned **monthly** with a soft brush. **Never** use screwdrivers or other metal probes to clean between the fins.
- ☐ 9. On water cooled units, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor technician.

Winter Storage

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is subject to freezing conditions.

Disconnect the freezer from the main power source to prevent possible electrical damage.

On water cooled freezers, disconnect the water supply. Relieve pressure on the spring in the water valve. Use air pressure on the outlet side to blow out any water remaining in the condenser, and then add a liberal amount of permanent type auto anti-freeze.

This is extremely important. Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Your local Taylor Distributor can perform this service for you.

Wrap detachable parts of the freezer such as the beater, blades, drive shaft, and freezer door. Place these parts in a protected, dry place. Rubber trim parts and gaskets can be protected by wrapping them with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication which attract mice and other vermin.

Section 10

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
1. No product being dispensed with the draw valve open and the control switch in AUTO.	a. The freezer door is installed upside down.	a. Install the door correctly.	20
	b. There is a freeze-up in the mix inlet hole.	b. Call service technician to adjust the hopper temperature.	--
	c. The beater motor is out on reset.	c. Reset the freezer.	17
	d. The beater is rotating counterclockwise.	d. Contact service technician to correct the rotation to clockwise.	--
	e. The draw valve is connected to the draw arm incorrectly.	e. The draw valve bracket must be correctly attached to the draw arm.	21
	f. The circuit breaker is off or the fuse is blown.	f. Turn the breaker on or replace the fuse.	--
	g. There is inadequate mix in the hopper.	g. Fill the hopper with mix.	22
2. The product is too cold.	a. The temperature control is set too cold.	a. Adjust the temperature control knob warmer.	18
	b. The draw handle is not fully closed.	b. The draw handle must be fully closed.	--
3. The product appears too soft.	a. The temperature control is set too warm.	a. Adjust the temperature control knob colder.	18
	b. There is not enough air space around the unit. (A/C)	b. Allow for adequate air flow across the condenser.	1
	c. The scraper blade(s) are worn.	c. Replace scraper blades regularly.	32
	d. Dirty condenser.	d. Clean regularly.	26
	e. The mix is out of date.	e. Use only fresh mix.	--
	f. The beater is rotating counterclockwise.	f. Contact service technician to correct rotation to clockwise.	--
	g. Loss of water (W/C)	g. Locate cause of water loss and correct.	26

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
3. The product appears too soft. (Cont'd.)	h. Product is broken down from overbeating.	h. Draw off some product to allow fresh product to enter the freezing cylinder.	--
4. The mix in the hopper is too cold.	a. The temperature is out of adjustment.	a. Call service technician to adjust the hopper temperature.	--
5. The mix in the hopper is too warm.	a. The temperature is out of adjustment.	a. Call service technician to adjust the hopper temperature.	--
	b. Hopper cover is not in position.	b. Place the cover in position.	23
	c. The control switch is OFF.	c. Place the control switch in AUTO.	23
	d. Warm mix was placed in the hopper.	d. Mix added to the hopper must be below 40°F (4.4°C).	--
6. The drive shaft is stuck in the gear box coupling.	a. Rounded corners of drive shaft, coupling, or both.	a. Call service technician to correct the cause and replace the necessary components. Do not lubricate the end of the drive shaft.	--
7. The freezing cylinder walls are scored.	a. The scraper blade(s) are not installed over the beater pins. The pins on the beater are broken.	a. Blade(s) must fit over the pins on the beater. Call service technician to repair the beater assembly.	20
	b. The beater assembly is bent.	b. Call service technician to repair or replace beater and to correct cause of insufficient mix in freezing cylinder.	--
	c. Missing or worn front bearing.	c. Install or replace the front bearing.	20
8. Excessive mix leakage into the rear drip pan.	a. Worn or missing drive shaft seal.	a. Replace regularly.	32
	b. Inadequate lubrication of drive shaft seal.	b. Lubricate properly.	19
	c. Worn rear shell bearing.	c. Call service technician to replace rear shell bearing.	--

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
8. Excessive mix leakage into the rear drip pan. (Cont'd.)	d. The drive shaft works forward.	d. Call service technician to correct.	--
	e. The seal is installed inside-out on the drive shaft.	e. Install correctly.	19
	f. The wrong type of lubricant is being used (example: petroleum base lubricant.).	f. Use the proper lubricant (example: Taylor Lube).	--
9. Excessive mix leakage from the door spout.	a. Worn or missing draw valve o-rings.	a. Replace regularly.	32
	b. Inadequate lubrication of the draw valve o-rings.	b. Lubricate properly.	20
	c. The wrong type of lubricant is being used (example: petroleum base lubricant.).	c. Use the proper lubricant (example: Taylor Lube).	--
10. No freezer operation with the control switch in AUTO.	a. The unit is unplugged.	a. Plug into wall receptacle.	--
	b. Circuit breaker off or blown fuse.	b. Turn circuit breaker on or replace fuse.	--
	c. Beater motor out on reset.	c. Reset the freezer.	17
11. Low overrun.	a. Worn scraper blade(s).	a. Replace regularly.	32
	b. The mix feed assembly is not installed.	b. Install in mix inlet hole.	23
	c. Product is broken down from over-beating.	c. Draw off some product to allow fresh product to enter the freezing cylinder.	--
12. The freezer door works loose.	a. The freezer studs are damaged.	a. Call service technician to replace studs.	--
	b. The handscrews are damaged.	b. Replace the handscrews.	--
	c. There are enlarged holes in the freezer door.	c. Replace the door.	--
	d. The handscrews are not tightened.	d. Tighten the handscrews equally in a crisscross pattern.	20
	e. The beater assembly is rubbing the back of the door.	e. Call service technician to correct the problem.	--

Troubleshooting Thermistor Components

Step 1

Power Switch in the "AUTO" Position

Using a voltmeter, check the two terminals connecting the transformer wires to the controller. There should be a reading of 24 volts ($\pm 15\%$); if not, the transformer is not receiving line voltage or the transformer is faulty and should be replaced. If a proper reading is obtained, proceed to the next step.

Step 2

Power Switch in the "AUTO" Position

Using a voltmeter, make certain L1 power is being supplied to the common terminal of the controller. A reading of line voltage should be obtained. To accomplish this, measure voltage between the common terminal and any L2 power source. If a proper reading is not obtained, make sure there is line voltage at the incoming power supply. If there is incoming power, back track from the common terminal (L1) and determine where L1 is being interrupted and correct accordingly. If a proper reading is obtained, proceed to the next step.

Step 3

Power Switch in the "AUTO" Position

Remove the probe wires from the controller. Place a wire between the two probe terminals of the controller to short the component. This should activate the compressor. If this procedure does not activate the compressor, check for line voltage. If there is line voltage at the compressor contactor coil, the controller is acceptable.

Step 4

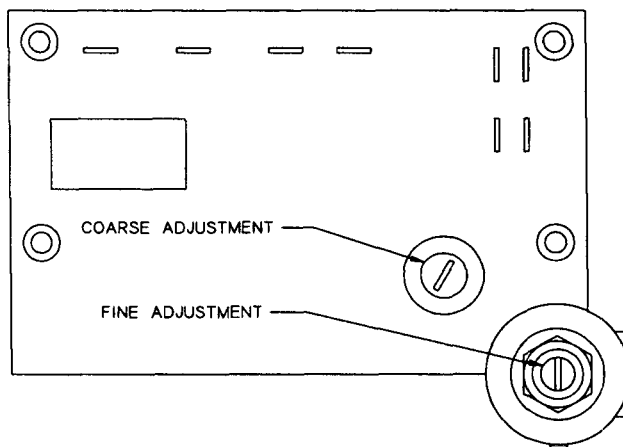
Power Switch in the "OFF" Position

Check the probe resistance. Disconnect both the yellow and black wires at the control, and measure their resistance with an ohmmeter. At room temperature, a reading of approximately 10,000 ohms should be obtained. If these readings are not obtained, replace the probe. When replacing the probe, fill the bulb-well with antifreeze. Connect the yellow wire to the white terminal and the black wire to the black terminal.

Step 5

Power Switch in the "OFF" Position

Check the anticipator microswitch by removing the wires connecting the switch to the controller, and check for continuity. If switch continuity exists when the draw handle is raised, the switch is effective. Continuity should break when the draw handle is lowered.



Section 11 Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 4 MONTHS	EVERY 6 MONTHS	ANNUALLY
Scraper Blade		X		
Drive Shaft Seal	X			
Drive Shaft O-Ring	X			
Freezer Door Gasket	X			
Front Bearing	X			
Draw Valve O-Ring	X			
White Bristle Brush, 3" x 7"			Inspect & Replace if Necessary	Minimum
White Bristle Brush, 9/16" x 38"			Inspect & Replace if Necessary	Minimum
White Bristle Brush, 1-1/2" x 2"			Inspect & Replace if Necessary	Minimum
Black Bristle Brush, 1" x 2"			Inspect & Replace if Necessary	Minimum
Double-Ended Brush			Inspect & Replace if Necessary	Minimum

Section 12

Service Parts Functions

PART DESCRIPTION	FUNCTION
Compressor	Provides circulation of refrigerant.
Condenser (air or water cooled)	Condenses refrigerant from a vapor to a liquid by removing heat from the refrigerant.
Dryer Filter	Removes foreign matter and moisture from the refrigerant.
Expansion Valve	Meters liquid refrigerant from the liquid line into the insulated shell evaporator.
Shell and Hopper Assembly	Insulated evaporator providing freezing and storage of product.
E.P.R. Valve	Controls pressure in the hopper evaporator.
Beater Line Starter	When the coil is energized, the relay closes. This permits power to flow to the overload relay, then to the beater motor.
Compressor Relay	When the coil is energized, the relay closes. This permits power to flow to the compressor.
Control Switch	When in "WASH", the control switch permits power to travel to the beater line starter. When in "AUTO", it permits power to travel to the thermistor control.
Thermistor Control	Monitors product in the freezing cylinder. When the product begins to get warm, the thermistor control allows power to flow to the compressor relay.
Transformer	Powers the thermistor control.
Mix Level Control	Activates the "MIX LOW" light when the mix level in the hopper becomes inadequate.
Door Switch	When the draw arm is raised, a micro switch closes and sends a signal to the thermistor control.
Water Valve (water cooled)	Controls the flow of water to the condenser by sensing the increasing and decreasing pressures at the high side of the compressor.
High Pressure Switch	Senses high head pressure at the compressor. In the event of a high pressure situation, the switch breaks power to the control switch and the freezer shuts down.
Blower (water cooled)	Dissipates heat from the interior of the freezer.
Fan Motor (air cooled)	Circulates air across the condenser.
Beater Motor	Drives the gear unit which in turn rotates the beater assembly.
Filter	Removes impurities from the refrigerant prior to the dryer.
Transformer	Used on high voltage units to reduce incoming voltage down to 230 volts to power the control circuitry.

Section 13

Parts List

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
BEARING-FRONT	013116	1	2	000		
BEARING-REAR SHELL *NICK PLATE	031324	1	2	000		
+GUIDE-DRIP SEAL	028992	1	2	000		
+NUT-BRASS BEARING	028991	1	2	000		
+WASHER-BEARING LOCK	012864	1	2	000		
BEATER A.-4QT-1 PIN-SUPPORT	X49490	1		103		
+BLADE-SCRAPER-PLASTIC 9-13/16L	046237	1		000		
+CLIP-SCRAPER BLADE*8.75 INCH*	046238	1		103		
BEATER A.-7QT-1 PIN-SUPPORT	X46233		2	103		
+BLADE-SCRAPER-PLASTIC 9-13/16L	046237		4	000		
+CLIP-SCRAPER BLADE*8.75 INCH*	046238		4	103		
BELT-AX45	045311	2		000		
BELT-AX38	023873		4	000		
BLOCK-TERMINAL 2P	039421	1		103	115 V, 60 Hz, 1 PH	
BLOCK-TERMINAL 3P	039423	1	2	103	460 V, 60Hz, 3 PH	
BRUSH-DOUBLE ENDED-PUMP&FEED T	013072	1	1	000		
BRUSH-DRAW VALVE 1-1/2"OD X 3"	014753	1	1	000		
BRUSH-MIX PUMP BODY-3"X7"WHITE	023316	1	1	000		
BRUSH-REAR BRG 1IN.DX2IN.LGX14	013071	1	1	000		
CAP-DESIGN-1.188"ID-6 POINT	013139-6	1	2	000		
COMPRESSOR L61B562DBEB	048727-58	1		512	460 V, 60 Hz, 3 PH	
NO COMPONENTS REQUIRED FOR 3 PHASE						
COMPRESSOR L63A113DBEA	048259-58		2	512	460 V, 60 Hz, 3 PH	
NO COMPONENTS REQUIRED FOR 3 PHASE						
COMPRESSOR L61B562BBAB	048727-12	1		512	115 V, 60 Hz, 1 PH	
+CAPACITOR-RUN- 20UF/370V	023606	1		103	115 V, 60 Hz, 1 PH	
+CAPACITOR-START-189-227UF/33	033044	1		103	115 V, 60 Hz, 1 PH	
+RELAY-START-COMPRESSOR	049656	1		103	115 V, 60 Hz, 1 PH	
COMPRESSOR TL3G-R134A	047701-	1	1	512	SHR	
+CAPACITOR-START-60UF-220/275V	047703	1	1	103	230 V, 60 Hz, 1 PH	
+COVER-TERMINAL-COMPRESSOR	047739	1	1	103	230 V, 60 Hz, 1 PH	
+RELAY-START-COMPRESSOR	027714-12	1		103	115 V, 60 Hz, 1 PH	

+ Available Separately
SHR (Separate Hopper Refrigeration)

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
+RELAY-START-COMPRESSOR-TL3G	047702-27	1	1	103	230 V, 60 Hz, 1 PH	
CONDENSER-AC-12 L X 16 H X 2.5T 3 ROW	048935	1		103		
CONDENSER-AC-12 L X 18 H X 4 ROW	050682		2	103		
CONDENSER-AC-7 X 6 X 1.25 2 ROW	027155	1	1	103	SHR	
CONTROL-MIX LEVEL	031799-	1	2	103		
CONTROL-TEMPERATURE	028914	1	1	103	SHR	
CONTROL-THERMISTOR	X46015-SER	1	2	103		
+KNOB-ALUMINUM	027422	1	2	103		
COVER A.-HOPPER INSULATED	X39291	1	2	103	M-702 115 V, 60 Hz, 1 PH only	
+KNOB-MIX COVER	025429	1	2	103		
COVER A.-HOPPER-STD	X38458	1		103	M-702 460 V, 60 Hz, 3 PH	
+KNOB-MIX COVER	025429	1		103		
+GASKET-HOPPER COVER-20 QT-SGL	038375	1		000		
DECAL-CLEAN INST.-HOPPER	019029	1	1	000		
DECAL-DEC-TAYLOR	021872	1	1	000		
DECAL-STANDBY ON-OFF	048493	1	1	000		
DECAL-TROUBLESHOOTING	038374	1	1	000		
DECAL-WARM-COLD-INT'L SYMBOL	013749	1		000		
DECAL-WARNING *PANEL*	036529	3		000		
DEFLECTOR-BLOWER EXHAUST	046586		1	103		
DIAGRAM-WIRING *741*710*	048342-	1		000		
DIAGRAM-WIRING *772*	051069-63		1	000	460 V, 60 Hz, 3 PH	
DOOR A.-1 SPOUT-4 QT	X30269-SER	1		103		
DOOR A.-1 SPOUT-7 QT	X30272-SER		2	103		
+DECAL-LIFT PLATE FRONT	015200	1	2	000		
+VALVE A.-DRAW	X13624-SP	1	2	103		
+O-RING-1-1/16 OD X.139W	020571	2	4	000		
DRYER-CAP. TUBE-HP62/R134A	047699	1	1	000	SHR 460 V, 60 Hz, 3 PH	
DRYER-CAP. TUBE-HP62/R134A	048255	1		000	SHR 115 V, 60 Hz, 1 PH	
DRYER-FILTER-HP62-3/8 X 1/4S	048901	1	2	000		
FUSE-3 AMP-600 VOLT	051194	1	1	000	460 V, 60 Hz, 3 PH	
GASKET-DOOR 5.177ID X 5.938OD	016672	1	2	000		
GEAR A.*REDUCER	012235	1	2	212		

+ Available Separately
SHR (Separate Hopper Refrigeration)

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
GUIDE A.-DRIP PAN	X50814	1		103		
GUIDE A.-DRIP PAN	X28698		2	103		
HOLDER-FUSE 600 VOLT PANEL MT.	051195	1	1	103	460 V, 60 Hz, 3 PH	
HOOD *310-311 320-321	021222	1		103		
HOOD **777 NAVY 25 INCH	029977		1	103		
KIT A.-TUNE UP*710-715-731-741	X33926	1		000		
BEARING-FRONT	013116	1		000		
CAP-DESIGN-1.188"ID-6 POINT	013139-6	1		000		
GASKET-DOOR 5.177ID X 5.938OD	016672	1		000		
O-RING-.643 OD X .077W	018572	2		000	FEED TUBE	
O-RING-1-1/16 OD X.139W	020571	2		000	DRAW VALVE	
SEAL-DRIVE SHAFT	032560	1		000	DRIVE SHAFT	
TOOL-CLEANING O-RING REMOVAL	048260	1		000		
KIT A.-TUNE UP*733-777*	X33928		1	000		
BEARING-FRONT	013116		2	000		
CAP-DESIGN-1.188"ID-6 POINT	013139-6		2	000		
GASKET-DOOR 5.177ID X 5.938OD	016672		2	000		
O-RING-.643 OD X .077W	018572		4	000	FEED TUBE	
O-RING-1-1/16 OD X.139W	020571		4	000	DRAW VALVE	
SEAL-DRIVE SHAFT	032560		2	000	DRIVE SHAFT	
TOOL-CLEANING O-RING REMOVAL	048260		1	000		
KNOB-DRAW VALVE	013635	1	2	103		
+NUT-LOCK KNOB	013649	1	2	103		
LABEL-DOOR CAUTION	032749	1	1	000		
LABEL-MIX COOLING ADJ-INTL SYM	020217	1	1	000		
LABEL-MOVING PARTS WARN	024315	3	3	000		
LABEL-WARM-COLD INT'L SYMBOL	013749	1	2	000		
LABEL-WIRING THREE PHASE	036880-3	1		000		
LIGHT-INDICATOR-ORANGE-ROUND	017450	1	2	103		
LIGHT-INDICATOR-RED-RECT.	023056-	1	2	103		
LUBRICANT-TAYLOR 4 OZ.	047518	1	1	000		
MAN-OPER 700 DUALMASTER	028759-M		1	000		
MAN-OPER 710/741/777 NAVY	032531-M	1		000		

+ Available Separately
SHR (Separate Hopper Refrigeration)

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
MOTOR-1.0 HP	013102-	1		212		
MOTOR-2.0 HP	017650-		2	212		
MOTOR-FAN	027309-	1	1	103	SHR	
MOTOR-FAN 50 WATT	029770-	1		103		
+FAN-5 BLADE 12" PUSH 22DEG CCW	049009	1		103		
NUT-STUD *GENERAL USAGE*	021508	4	8	103	HANDSCREWS	
PAIL-MIX-10 QT.	013163		1	000		
PAIL-MIX-6 QT.	023348	1		000		
PAN-DRIP 11-5/8 LONG	027503		2	103		
PAN-DRIP 13-1/4 LONG	039027	1		103		
PANEL A-FRONT	X50930	1		103		
PANEL A-FRONT	X50835		1	103		
PANEL A-SIDE	X44853		1	103	LOWER LEFT	
PANEL A-SIDE	X44855		1	103	LOWER RIGHT	
PANEL A-SIDE LEFT	X50940	1		103	LOWER LEFT	
PANEL-REAR *702*NAVY*	050929	1		103	REAR	
PANEL-REAR *772*NAVY*	029996		1	103		
PANEL-SERVICE	029976		1	103		
PANEL-SIDE *702*RIGHT*	050928	1		103	LOWER RIGHT	
PANEL-SIDE UPPER	042317	2		103	UPPER LEFT & RIGHT	
PANEL-SIDE-TOP	029978		2	103	VERY TOP	
PANEL-UPPER SIDE-LEFT	029981		1	103	MIDDLE LEFT	
PANEL-UPPER SIDE-RIGHT	029980		1	103	MIDDLE RIGHT	
PLATE-DEC-777 NAVY	029995		1	103		
PLATE-DEC-SINGLE-ROCKER SWITCH	022604	1		103		
PROBE A.-MIX *SQUARE*	X30922	1	2	103		
+DISC-PROBE *SQ HOLE*	030965	1	2	103		
+SPACER-PROBE *SQ HOLE*	030966	1	2	103		
PROBE A.-THERMISTOR	X31602	1	2	103		
PULLEY-2AK22-7/8	019987		2	103	BEATER MOTOR	
PULLEY-2AK27 X .625-.6265	011545	1		103	BEATER MOTOR	
PULLEY-2AK64-5/8 BORE	039695		2	103	GEAR	
PULLEY-2AK74-5/8	027822	1		103	GEAR	

+ Available Separately
SHR (Separate Hopper Refrigeration)

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
RELAY-3 POLE	012725-	1	2	103		
RELAY-DPDT-20 A-230 V	02581-27	1	3	103	STIR CYCLE TIMER/BLOWER	
SANITIZER KAY-5 125 PACKETS	041082	1	1	000		
SHAFT-BEATER	033498	1	2	103		
+SEAL-DRIVE SHAFT	032560	1	2	000		
SHELL A.-INSULATED*702*12 INCH	X50815	1		512		
+STUD-NOSE CONE	022822	4		103		
SHELL A.-INSULATED *772*NAVY	X50831		1	512		
+STUD-NOSE CONE	022822		8	103		
SHIELD-MIX-GEAR REDUCER 3-3/8"	013356	1	2	103		
SHIELD-SPLASH	029997		1	103		
SHIELD-SPLASH 15"L X 5-13/32"W	022763	1		103		
SHROUD-CONDENSER	051185		1	103		
SHROUD-DANFOSS	048818	1		103	SHR	
SHROUD-DANFOSS	027386		1	103	SHR	
SHROUD-FAN *142*	048877	1		103	AIR COOLED	
SHROUD-FRONT	013847		1	103		
SHROUD-REAR	013848		1	103		
STARTER-1 PHASE 9 TO 15 AMP	041950-12M	1		103	115 V, 60 Hz, 1 PH	
STARTER-3 PH 1.4 TO 2.3A 5HP	041950-33G	1	2	103	460 V, 60 Hz, 3 PH	
SWITCH A.-DRAW *632-710-31-41-	X51242	1	2	103		
ARM A.-DRAW VALVE	X28874	1	2	103		
BRACKET-DOOR SWITCH	028875	1	2	103		
E-RING 3/16 .335 O.D.	049178	1	2	000		
PIN-PIVOT	015478	1	2	103		
PLATE-DRAW VALVE LIMITER *702*	051241	1	2	103		
SPRING-RETURN	015342	1	2	103		
SWITCH-LEVER-SPDT-10A-125-250V	028889	2	4	103		
SWITCH-PRESSURE 440 PSI-SOLDER	048230	1	2	103		
SWITCH-ROCKER-DPDT ON-OFF-ON	014237	1	2	103		
+BRACKET-ROCKER SWITCH	020820	1	2	103		
+CARD-WASH-OFF-AUTO	014091	1	2	000		
SWITCH-TOGGLE-DPDT*ON-NONE-ON	024295	1	2	103	SHR/CTR	

+ Available Separately
SHR (Separate Hopper Refrigeration)

DESCRIPTION	PART NUMBER	702 QTY.	772 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
TIMER-CYCLE 5SEC ON/120SEC OFF	037188-27	1	2	103		
TRANS.-240V PR1/24V SEC 10 VA	030132-27	1	2	103	460 V, 60 Hz, 3 PH	
TRANS.-CONT.-1 KVA	021093		1	103		
TRANS.-CONT.-500 VA	021091	1		103	460 V, 60 Hz, 3 PH	
TRANS.-CONT.-ANTICIPATOR 20 VA	016352-12	1		103	115 V, 60 Hz, 1 PH	
TRAY-DRIP 14-7/8L X 5-1/8 SGL	013690	1		103		
TRAY-DRIP 22-7/8L X 5-1/8W	029998		1	103		
TRIM-CORNER *390*LEFT	047002	1		103	REAR	
TRIM-CORNER *390*RIGHT	047003	1		103	REAR	
TRIM-FRONT *390*	047001	1		103	BELOW DRIP TRAY	
TRIM-REAR-CORNER-LEFT	029982		1	103		
TRIM-REAR-CORNER-RIGHT	029983		1	103		
TUBE-FEED-SS-3/16	028967-3		2	103		
TUBE-FEED-SS-5/32 HOLE	028967-2	1		103		
VALVE-ACCESS 1/4FL X 1/4SOLDER	044404	1	1	103		
VALVE-ACCESS 1/4FL X 3/8SDR-	044455		2	103		
VALVE-ACCESS 1/4FL X 3/8SOLDER	043232	1		103		
VALVE-ACCESS-1/4 MFLX1/4 S-90	047016	2	3	103		
VALVE-EPR 1/4S	022665	1	1	103		
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	1	2	103		
+BOOT-EXPANSION VALVE	050900	2	2	000		
VARISTOR A.-SLEEVE TERMINAL	X31547	1	2	103	THERMISTOR CONTROL	
VIDEO-TRAIN FILM-DUALMASTER/SH	043568-V	1	1	000		

+ Available Separately
SHR (Separate Hopper Refrigeration)

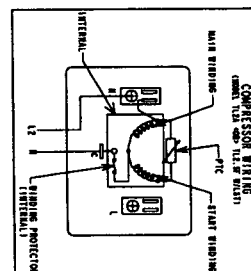
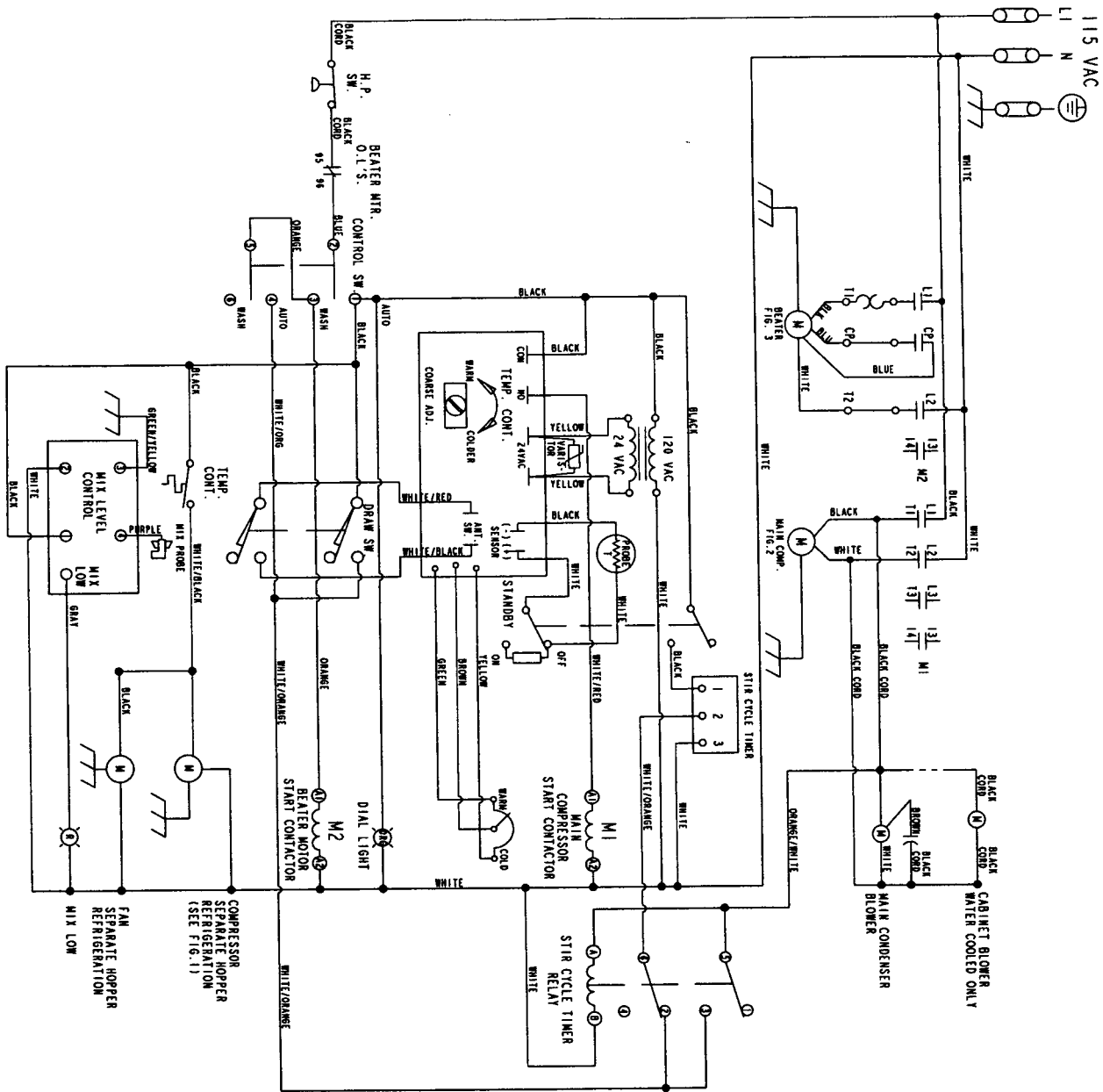


FIG. 1

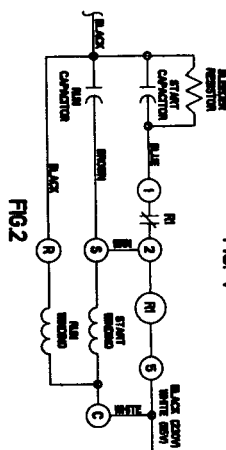


FIG. 2

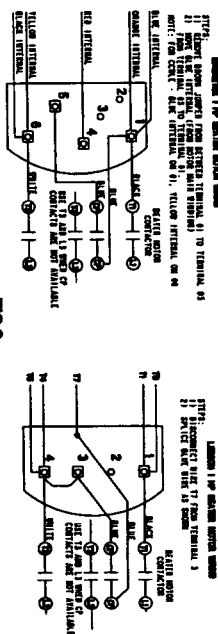
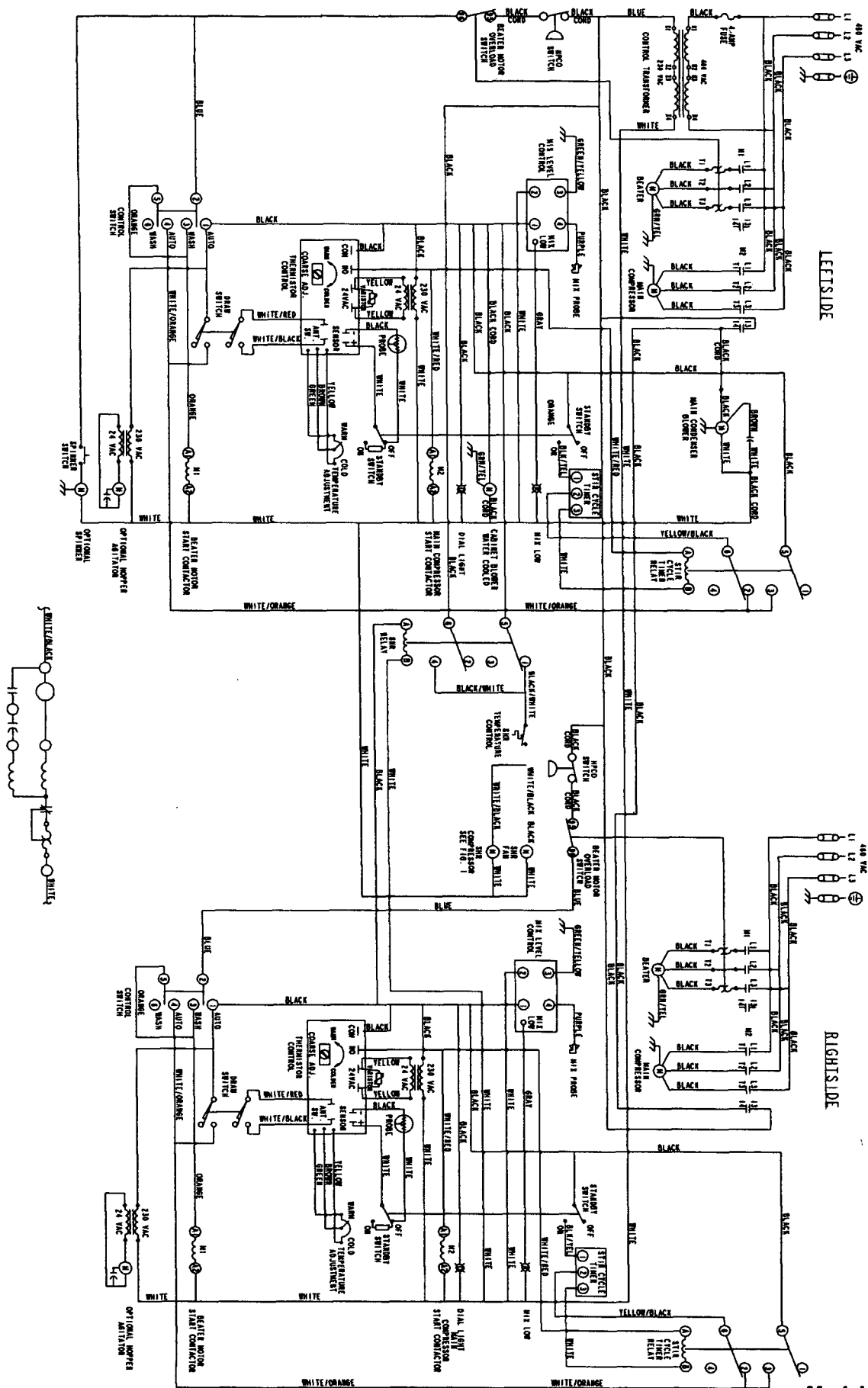
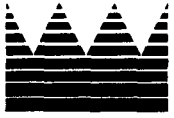


FIG. 3

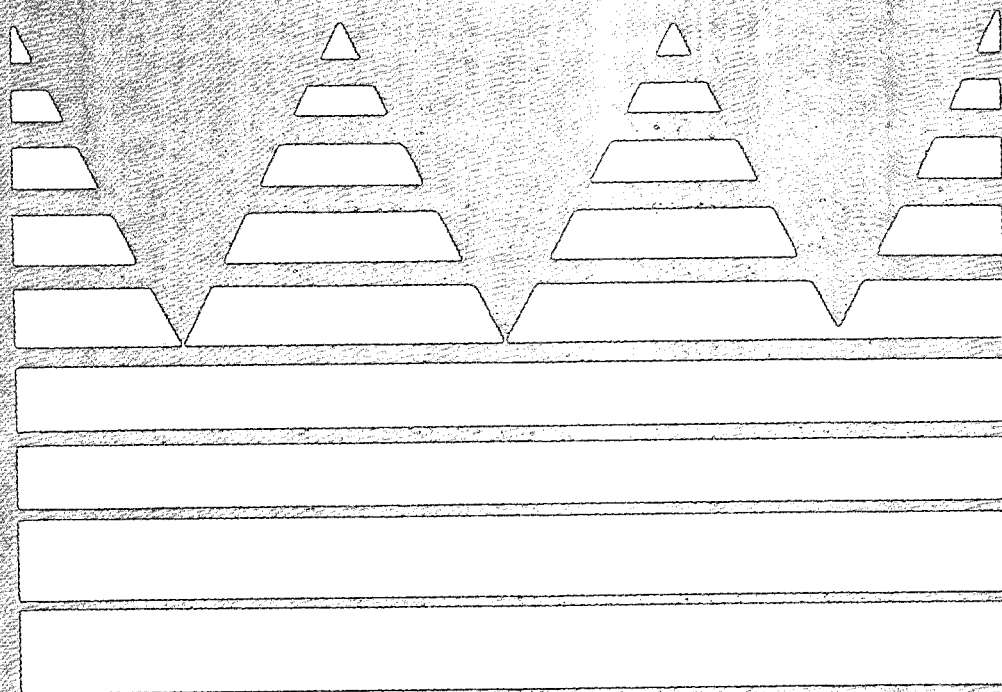
COMPRESSOR & BEATER PROTECTED UNDER
PRIMARY SINGLE PHASING CONDITIONS.



Model 772
051069-63

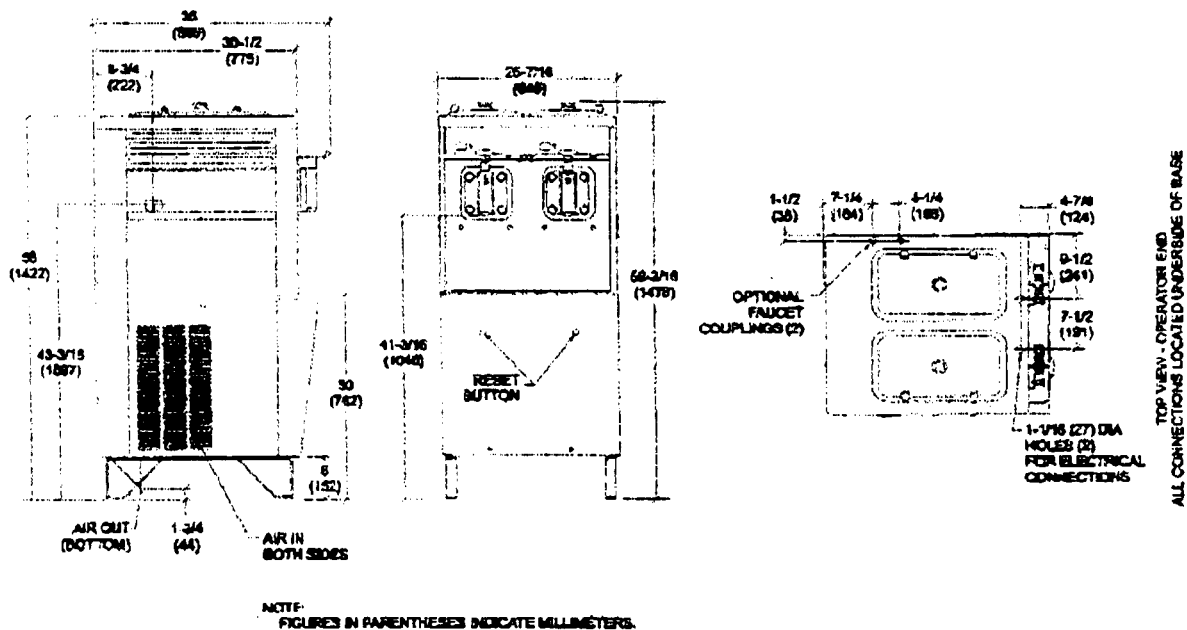


Notes



TAYLOR®

Model 772



Freezing Cylinder

Two, 7 quart (8.6 liter).

Mix Hopper

Two, 20 quart (18.9 liter). Separate hopper refrigeration (SHR) maintains mix temperature below 41°F (5°C) during AUTO and STANDBY modes.

Beater Motor

Two, 2.0 HP.

Refrigeration Unit

Two, 9,500 btu/hr. R404A.

**Separate Hopper Refrigeration (SHR) - One 400
btu/hr. R134a.**

Electrical

Standard is 460/60/3; however, other electrical characteristics are available. All internal connections are completed at the factory.

The left side requires 15A maximum fuse size and 13A minimum circuit ampacity.

The right side requires 12A maximum fuse size and 9A minimum circuit ampacity. Consult the unit data label.

Air Cooled

Minimum 3" (76 mm) around all sides. Install the deflector to prevent recirculation of warm air.

Dimensions

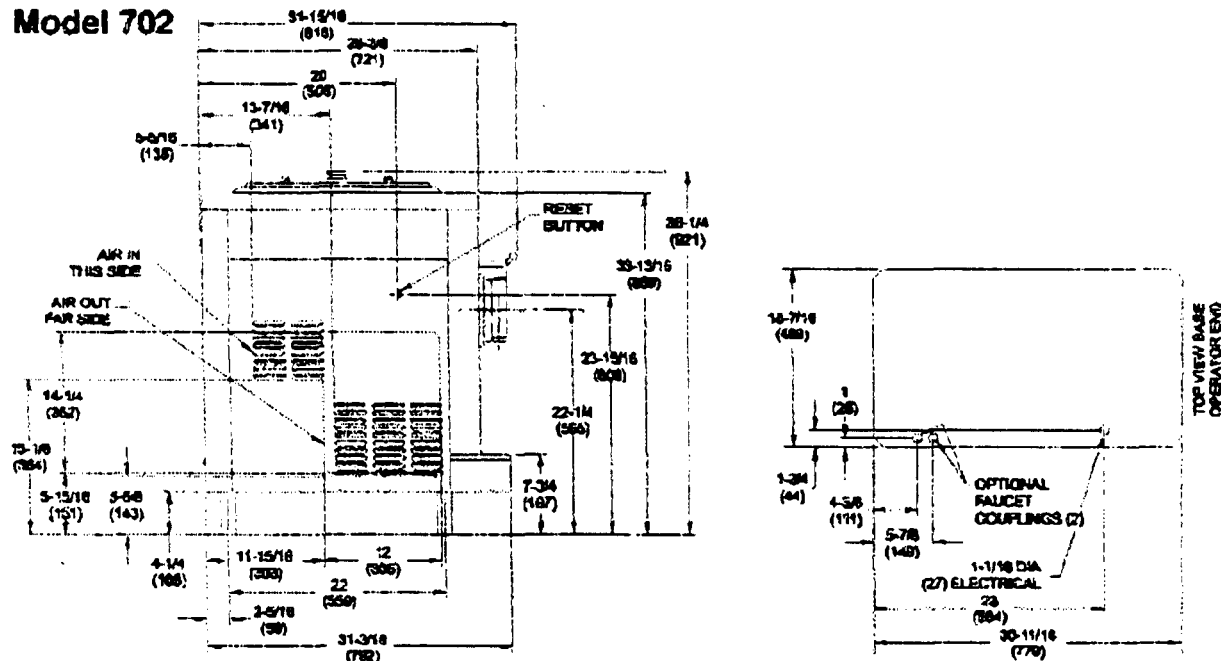
Width: 25-7/16" (646 mm)
Depth: 35" (889 mm)
Height: 58-3/16" (1478 mm)
Floor Clearance: 6" (152 mm)

Approximate Weights

Net: 800 lbs. (362.9 kgs.)
Crated: 872 lbs. (395.5 kgs.)

Navy Specifications

Model 702



NOTE:
FIGURES IN PARENTHESES INDICATE MILLIMETERS.

Freezing Cylinder

One, 4 quart (3.8 liter).

Mix Hopper

One, 20 quart (18.9 liter). Separate hopper refrigeration (SHR) maintains mix temperature below 41°F (5°C) during AUTO and STANDBY modes.

Beater Motor

1.0 HP

Refrigeration Unit

One, 4,900 btu/hr. R404A.

Separate Hopper Refrigeration (SHR) - One, 400 btu/hr. R134a

Electrical

Standard is 460/60/3, however, other electrical characteristics are available. All internal connections are completed at the factory.

Requires 8A maximum fuse size and 6A minimum circuit ampacity. Consult the unit data label.

Air Cooled

Minimum of 3" (76 mm) on both sides and 6" (152 mm) at the rear of the unit.

Dimensions

Width: 18-7/16" (468 mm)
Depth: 31-15/16" (811 mm)
Height: 36-1/4" (921 mm)
Floor Clearance: 4-1/4" (108 mm)

Approximate Weights

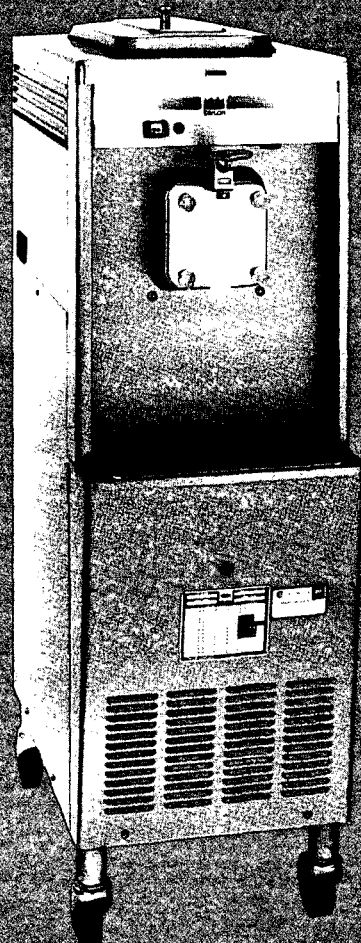
Net: 313 lbs. (142.0 kgs.)
Crated: 345 lbs. (156.5 kgs.)

OPERATOR'S MANUAL

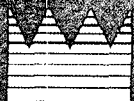


TAYLOR

Navy Soft Serve Freezer



Model 741



TAYLOR COMPANY

a Specialty Equipment Company

Rockford, Illinois 61107

Complete this page for quick reference when service is required:

Taylor Distributor: _____

Address: _____

Phone: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage _____ Cycle _____

Phase _____

Maximum Fuse Size: _____ A

Minimum Wire Ampacity: _____ A



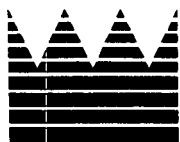


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Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

Section 1

To the Installer

Water Connections (Water Cooled Units Only)

An adequate cold water supply must be provided with a hand shut-off valve. On the underside rear of the base pan, two 3/8" I.P.S. water connections for inlet and outlet have been provided for easy hook-up. 1/2" inside diameter water lines should be connected to the machine. (Flexible lines are recommended, if local codes permit.) Depending on local water conditions, it may be advisable to install a water strainer to prevent foreign substances from clogging the automatic water valve. There will be only one water "in" and one water "out" connection for both single head and double head units. DO NOT install a hand shut-off valve on the water "out" line! Water should always flow in this order: first, through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an **open trap drain**.

Air Cooled Units

Air cooled units require a minimum of 3" (7.6 cm) of clearance around **all** sides of the freezer to allow for adequate air flow across the condenser(s). Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

Note: An air deflector must be installed to direct the discharged air.

Electrical Connections

Each freezer requires one power supply for each data label. Check the data label on the freezer for fuse, wire ampacity and electrical specifications. Refer to the wiring diagram provided inside of the electrical box, for proper power connections.

This equipment is intended to be installed in accordance with the National Electrical Code (NEC), NFPA 70. The purpose of this code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!



CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!

Running Specifications

Expansion Valve Setting

404A/HP62: 20 to 22 PSI (138 to 152 kPa.) for normal products at temperatures of 18 to 20°F. (-7.8 to -6.7°C.).

Low Side Pressure

Low side pressure = expansion valve setting.

To adjust the low side pressure, place the gauge on the low side suction port at the compressor. With the compressor running, turn the adjustment knob of the automatic expansion valve clockwise to raise low side pressure and counterclockwise to lower pressure.

High Side Pressure

Air Cooled: The following chart indicates normal operating head pressures at various ambient temperatures:

Ambient Temperature		Normal Operating Head Pressures
F.	C.	PSI
70°	21.1°	240 - 270 (1,655 - 1,862 kPa.)
80°	26.7°	270 - 300 (1,862 - 2,069 kPa.)
90°	32.2°	300 - 340 (2,069 - 2,344 kPa.)
100°	37.8°	340 - 380 (2,344 - 2,620 kPa.)

Water Cooled: High side pressure for water cooled units is determined by the water valve. The water valve is factory set to maintain a high pressure of 235 PSI (1,620 kPa.). To adjust the high pressure, place the gauge on the high side access port. Turn the adjustment knob on the water valve clockwise to lower the high side pressure and counterclockwise to raise the pressure.

The high side pressure switch is factory set at 440 PSI (3,034kPa) for 404A/HP62. In the event of a water loss, this switch will sense a rise in pressure and deactivate the freezer.

Check Out

Once the unit is installed, it is advisable to check the following controls and mechanical operations of the freezer and to make any necessary adjustments. If applicable, repeat these checks for the second freezing cylinder on double head units.

Controls

Place the control switch in the "AUTO" position. The main refrigeration system will operate (compressor, beater motor, and the condenser fan). The dial light and the mix low indicator will be lit.



Figure 1

If the freezer is water cooled, the automatic water valve will begin to open and cold water will flow into the condenser. This will remove heat from the refrigerant. As the water flows into the open trap drain, it should be warm to the touch. Place the control switch in the "OFF" position.

Beater Rotation

Beater rotation must be clockwise as viewed looking into the freezing cylinder.

To correct rotation on a three-phase unit, interchange any two incoming power supply lines at the freezer main terminal block only.

To correct rotation on a single-phase unit, exchange leads inside the beater motor. (Follow the diagram printed on the motor.)

Electrical connections are made directly to the terminal block provided in the main control box located behind the service panel.

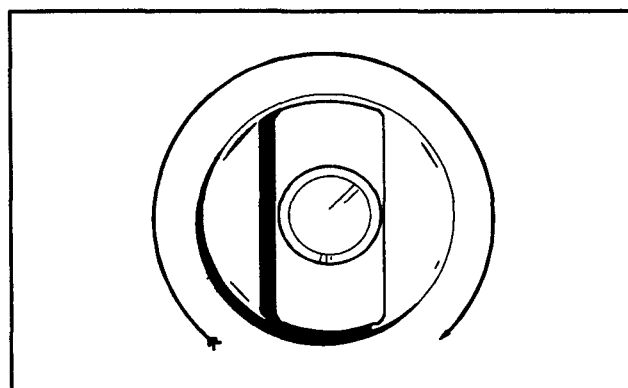


Figure 2

Note: Electrical connections should be performed by a trained service technician.

Gear Alignment

To prevent costly parts damage and to prevent excessive mix leakage, the gear unit must be perfectly aligned. To check gear alignment, insert the drive shaft through the rear shell bearing and into the gear unit. Move the drive shaft in and out of the gear unit, using all positions of the hex end. If any binding of the drive shaft occurs, the gear unit could be out of alignment.

Inspect the bolts which mount the gear unit. make sure they are tightened down.

To prevent excessive mix leakage, check the rear shell bearing. The locking tab should be folded over the nut to prevent the nut from working loose.

Section 2

Thermistor Control

Function

The thermistor control maintains temperature in the freezing cylinder by monitoring the resistance of the thermistor probe.

Specifications

Temperature Differential: cut in = 2°F. (1.1°C.) above cut-out.

Coarse Adjustment Range: 10° to 30°F. (-12° to -1°C.).

Fine Adjustment Range: 4°F. (2°C.) total.

Coarse Adjustment Potentiometer: 1/4 turn = approximately 6°F. (3°C.).

Input Voltage Supply: 24 VAC.

Thermistor Probe

The resistance value of the thermistor probe corresponds with the product temperature in the freezing cylinder. As the product becomes colder, the probe resistance increases. As the product becomes warmer, the probe resistance decreases.

Approximate probe resistance readings:

1. 10,000 ohms at room temperature (78°F. / 25°C.).
2. 46.012 ohms at product temperature (20°F. / -6.6°C.).

Operation

The thermistor probe is positioned in the bulb-well located at the front of the freezing cylinder. The thermistor control becomes operational when powered by the 24 VAC transformer.

When the desired product is achieved (control set-point) the thermistor control relay opens and discontinues the power sent to the compressor relay coil.

When the product in the freezing cylinder reaches 2°F. (1°C.) above the control set-point, the thermistor relay closes, sending L1 power to the compressor relay coil. The refrigeration system will run until the control set-point is achieved.

Anticipator

The anticipator signals the thermistor control to activate the refrigeration system whenever product is drawn. As the draw valve is raised (freezer draw switch closes), continuity is created between the thermistor control anticipator terminals. The thermistor control relay will close within 1 second to start the refrigeration system.

Upon completing the draw, the thermistor control recognizes the loss of continuity between the anticipator terminals, but will continue refrigeration for at least 25 seconds. This allows for additional blending and freezing of the warmer mix which has entered the freezing cylinder. After approximately 25 seconds have elapsed, the thermistor control returns to normal operation and cycles off the refrigeration system when the set-point temperature is achieved.

Setting Temperature

1. Position the thermistor fine adjustment at mid-range. This will limit the fine adjustment temperature range to $\pm 2^{\circ}\text{F}$. ($\pm 1^{\circ}\text{C}$).
2. Turn the coarse adjustment clockwise to the coldest setting.
3. With the freezer correctly primed, place the control switch in the "AUTO" position.
4. After the appropriate freezing time, test the product temperature. When a sample portion temperature is approximately 1° above the desired temperature setting, slowly turn the coarse adjustment counterclockwise (warmer) until the refrigeration system cycles off.
5. Allow the refrigeration system to cycle through at least two "off" cycles. After the unit cycles off, draw a sample of product and check the temperature. Readjust the coarse adjustment as required, but make only small adjustments.

Note: The anticipator automatically activates the refrigeration system 0 - 1 second after the draw valve is opened. If several small samples are drawn, the temperature may drift lower. To accurately set the control, let the product temperature stabilize by allowing the thermistor control to cycle the freezer on and off by the control set point instead of the anticipator.

Service Tips

If a problem arises with the thermistor control assembly, identify and replace only the faulty component. For example, if the probe is defective, replace only the probe.

A varistor must be connected to the thermistor control's 24 VAC terminals in order to protect the control from voltage spikes (varistor part number X31547).

Fill the bulb-well with automotive antifreeze before installing the thermistor probe, and be sure the probe is installed completely into the bottom of the bulb-well.

Note: Lower the probe to the point where the wires extend from the probe and a resistance is felt. This indicates the probe is installed completely in the bottom of the bulb-well.

If the thermistor relay which *starts* the compressor will not close, check the following items:



ELECTRICAL SHOCK AREA! USE CAUTION!

1. Make sure power is being supplied to the freezer and that all operating switches are in the correct position.
2. Using a voltmeter, check the voltage supply to the thermistor control. The control requires 24 volts to operate.
3. Using an ohmmeter, check probe resistance. (Refer to the thermistor curve chart on page 5 for proper readings.)

If the thermistor relay which *deactivates* the compressor will not open, check the following items:



ELECTRICAL SHOCK AREA! USE CAUTION!

1. Make sure the thermistor relay opens when the freezer control switch is in the "OFF" position.
2. Make sure the thermistor probe is connected to the correct probe terminals.
3. Using an ohmmeter, check the thermistor probe for proper resistance. (Refer to the thermistor curve chart on page 5 for proper readings.)
4. Disconnect one wire to an anticipator terminal. If the thermistor relay opens after approximately 25 seconds, the problem is in the anticipator wiring circuit.

When problems such as erratic product quality occur, it is of utmost importance to determine if the thermistor components are defective before replacing them.

See page 30 for Troubleshooting Thermistor Components.

Thermistor Curve Chart

F.	C.	K OHM	F.	C.	K OHM	F.	C.	K OHM
-10	-23.3	118.201	22	-5.5	43.530	54	12.2	17.915
-9	-22.7	114.394	23	-5.0	42.340	55	12.7	17.451
-8	-22.2	110.709	24	-4.4	41.136	56	13.3	16.998
-7	-21.6	107.143	25	-3.8	39.967	57	13.8	16.557
-6	-21.1	103.692	26	-3.3	38.830	58	14.4	16.128
-5	-20.5	100.352	27	-2.7	37.727	59	15.0	15.710
-4	-20.0	97.120	28	-2.2	36.654	60	15.5	15.315
-3	-19.4	94.085	29	-1.6	35.612	61	16.1	14.929
-2	-18.8	91.144	30	-1.1	34.599	62	16.6	14.554
-1	-18.3	88.296	31	-0.5	33.616	63	17.2	14.187
0	-17.7	85.536	32	0	32.660	64	17.7	13.830
1	-17.2	82.863	33	0.5	31.760	65	18.3	13.482
2	-16.6	80.273	34	1.1	30.885	66	18.8	13.143
3	-16.1	77.765	35	1.6	30.035	67	19.4	12.812
4	-15.5	75.334	36	2.2	29.207	68	20.0	12.490
5	-15.0	72.980	37	2.7	28.403	69	20.5	12.185
6	-14.4	70.627	38	3.3	27.620	70	21.1	11.888
7	-13.8	68.350	39	3.8	26.859	71	21.6	11.598
8	-13.3	66.147	40	4.4	26.120	72	22.2	11.315
9	-12.7	64.014	41	5.0	25.400	73	22.7	11.039
10	-12.2	61.951	42	5.5	24.721	74	23.3	10.769
11	-11.6	59.953	43	6.1	24.059	75	23.8	10.507
12	-11.1	58.021	44	6.6	23.416	76	24.4	10.250
13	-10.5	56.150	45	7.2	22.789	77	25.0	10.000
14	-10.0	54.340	46	7.7	22.180	78	25.5	9.763
15	-9.4	52.854	47	8.3	21.586	79	26.1	9.532
16	-8.8	51.409	48	8.8	21.009	80	26.6	9.306
17	-8.3	50.003	49	9.4	20.447	81	27.2	9.085
18	-7.7	48.636	50	10.0	19.900	82	27.7	8.870
19	-7.2	47.306	51	10.5	19.384	83	28.3	8.659
20	-6.6	46.012	52	11.1	18.881	84	28.8	8.454
21	-6.1	44.754	53	11.6	18.392	85	29.4	8.254

When checking a thermistor probe, first determine the temperature at the probe and find it on this chart, along with the correct ohmmeter reading. If your ohmmeter reading varies from the correct reading, determine whether the difference is acceptable. If a probe is faulty, the difference will be great.

Section 3

Motor Characteristics

Motor Characteristics and Performance Data

Item # _____

Sheet _____ of _____

Manufacturer: Magnetek

Master Drawing: 017650-33

Certification Data: 332970

Quantity: 1 per machine

Rating (HP/Volts/Phase): 2 HP, 208-220/440/3

Insulation: B

Weight: 42 lbs.

Cycles: 60

Design: B

Torque-Starting: 316%

Full Load: 96 oz. ft.

Amperes-Starting: 49

Full Load: 6.6

Power Factor:

Full Load: .729

1/2 Load: .501

3/4 Load: .627

Locked: .766

Enclosure: Drip Proof

Duty: Continuous

Type: Induction

Ambient Degree °C: 40°C

Full Load KW: 1.885

Motor Frame: 145T

Efficiency: .859

Symbol No. _____

Motor Data

Item # _____

Sheet _____ of _____

Manufacturer: Magnetek

Master Drawing: 017650-33

Certification Data: 332970

Rating (HP/Volts/Phase): 2 HP, 208-220/440/3

Size: 145T

Type: SC

Duty: Continuous

Low Voltage Feature: Standard

Overload Relay:

Heater Catalog No: None

Ambient Degree °C: 40°C

Enclosure: Drip Proof

Quantity: 1 per machine

Symbol No. _____

Motor Data

Item # _____

Sheet _____ of _____

Manufacturer: Leeson Electric

Master Drawing: 017650-33, Leeson Outline Drawing 33101

Certification Data: 120532.00

Equipment Model No.: C145T17DB21

Quantity: 1 per machine

Rating (HP/Volts/Phase): 2 HP, 208-230/460/3

Insulation: B

Cycles: 60

Design: C

Enclosure: Drip Proof

Service: 1.15

Duty: Continuous

Type: TD Induction

Ambient Degree °C: 40°C

Motor Frame: F145T

Efficiency: 81%

Symbol No. _____

Motor Data

Item # _____

Sheet _____ of _____

Manufacturer: Leeson

Master Drawing: 017650-33, Outline 33101

Certification Data: 120532.00

Rating (HP/Volts/Phase): 2 HP, 208-230/460, 3

Size: F145T

Type: TD

Low Voltage Feature: Standard

Overload Relay:

Heater Catalog No: None

Ambient Degree °C: 40°C

Enclosure: Drip Proof

Quantity: 1 per machine

Symbol No. _____

Motor Data

Item # _____

Sheet _____ of _____

Manufacturer: Magnetek

Master Drawing: 046536-27

Certification Data: DF2J026

Quantity: 1 per machine

Insulation: B

Weight: 28 lbs.

Cycles: 50/60

Design: Special

Torque-Starting: 144%

Full Load: 121.09 oz. in.

Amperes-Starting: 4.9

Full Load: 3.2

Power Factor:

Full Load: .702

1/2 Load: .950

3/4 Load: .931

Locked: 0

Enclosure: Drip Proof

Duty: Continuous

Type: Induction

Ambient Degree °C: 40°C

Full Load KW: .1298

Motor Frame: 42

Efficiency: 39.5%

Symbol No. _____

Motor Data

Item # _____

Sheet _____ of _____

Manufacturer: Magnetek

Master Drawing: 046536-27

Certification Data: DF2J026

Size: 42

Low Voltage Feature: Standard

Overload Relay:

Heater Catalog No: Thermally Protected

Quantity: 1 per machine

Symbol No. _____

Section 4

To the Operator

The freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor freezer, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, this machine will require cleaning and maintenance. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.

This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your Taylor freezer will NOT eventually compensate and correct for any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that all personnel responsible for the equipment's operation review these procedures in order to be properly trained and to make sure that there is no confusion.

In the event that you should require technical assistance, please contact your local authorized Taylor Distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, **only the refrigerant specified on the affixed data label should be used.** The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms.

The Taylor Company will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

<p>The freezer you have purchased uses refrigerants 404a and 134a. These "ozone friendly" refrigerants comply with the U.S. Clean Air Act of 1990.</p>

Section 5

Safety

We at Taylor Company are concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. Taylor has gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician. As an example, warning labels have been attached to the freezer to further point out safety precautions to the operator.

IMPORTANT – Failure to adhere to the following safety precautions may result in severe personal injury or death. Failure to comply with these warnings may damage the machine and its components. Component damage will result in part replacement expense and service repair expense.

To Operate Safely:



DO NOT operate the freezer without reading this operator's manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.



DO NOT operate the freezer unless it is properly grounded. Failure to follow this instruction may result in electrocution.



DO NOT allow untrained personnel to operate this machine. Failure to follow this instruction may result in severe personal injury to fingers or hands from hazardous moving parts.



DO NOT attempt any repairs unless the main power supply to the freezer has been disconnected. Failure to follow this instruction may result in electrocution. Contact your local authorized Taylor Distributor for service.



DO NOT operate the freezer with larger fuses than specified on the freezer data label. Failure to follow this instruction may result in electrocution or damage to the machine. Consult your electrician.



DO NOT operate the freezer unless all service panels and access doors are restrained with screws. Failure to follow this instruction may result in severe personal injury from hazardous moving parts.

DO NOT obstruct air intake and discharge openings:

Air Clearance: 3" (7.6 cm) minimum air space on sides and rear, and 7-1/2" (19.1 cm) minimum on bottom. Failure to follow this instruction may cause poor freezer performance and damage to the machine.



DO NOT put objects or fingers in door spout. Failure to follow this instruction may result in contaminated product or personal injury from blade contact.



DO NOT remove the door, beater, scraper blades, or drive shaft unless the control switch is in the "OFF" position. Failure to follow this instruction may result in severe personal injury from hazardous moving parts.

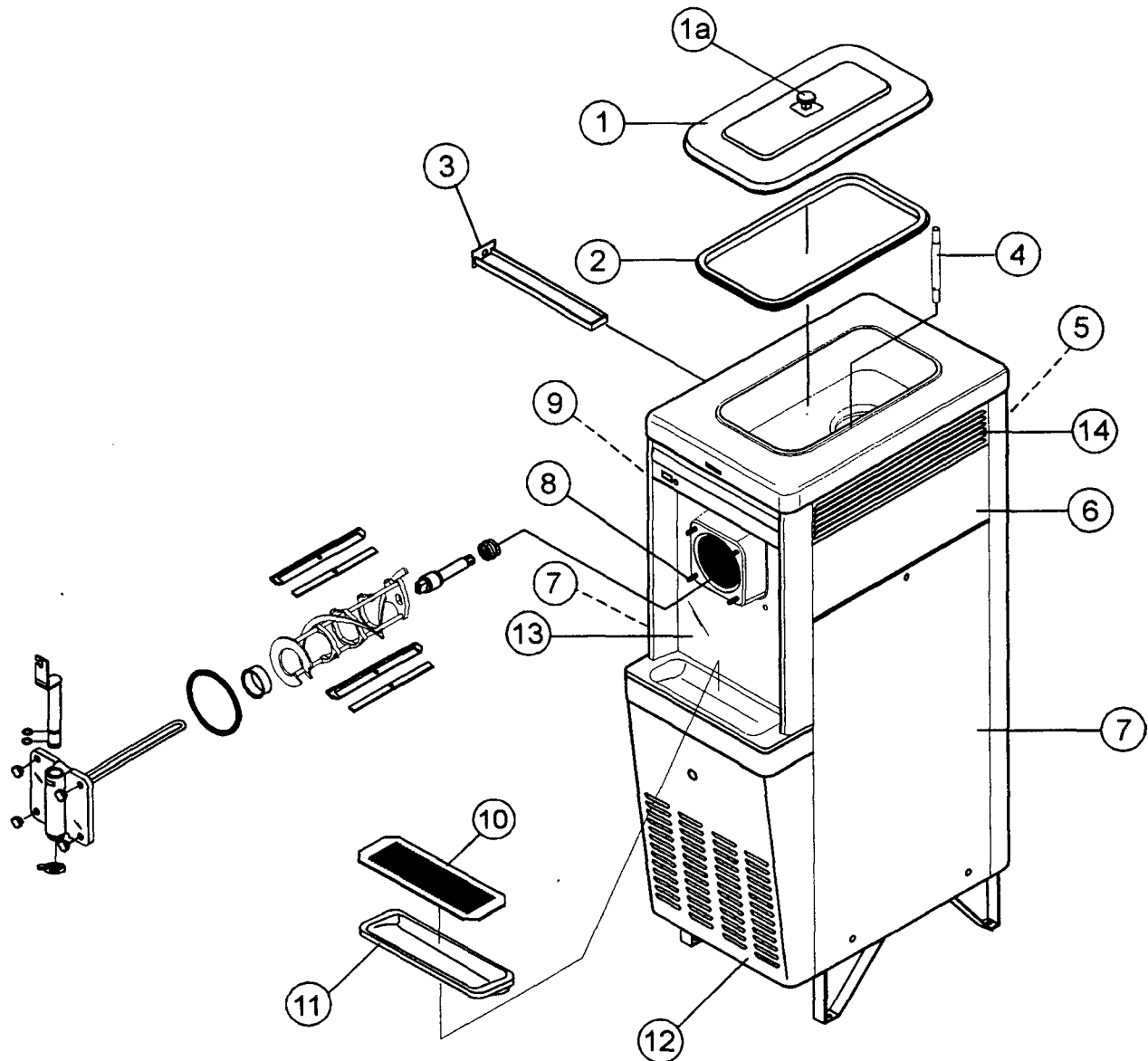


USE EXTREME CAUTION when removing the beater assembly. The scraper blades are very sharp and may cause injury.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

Section 6

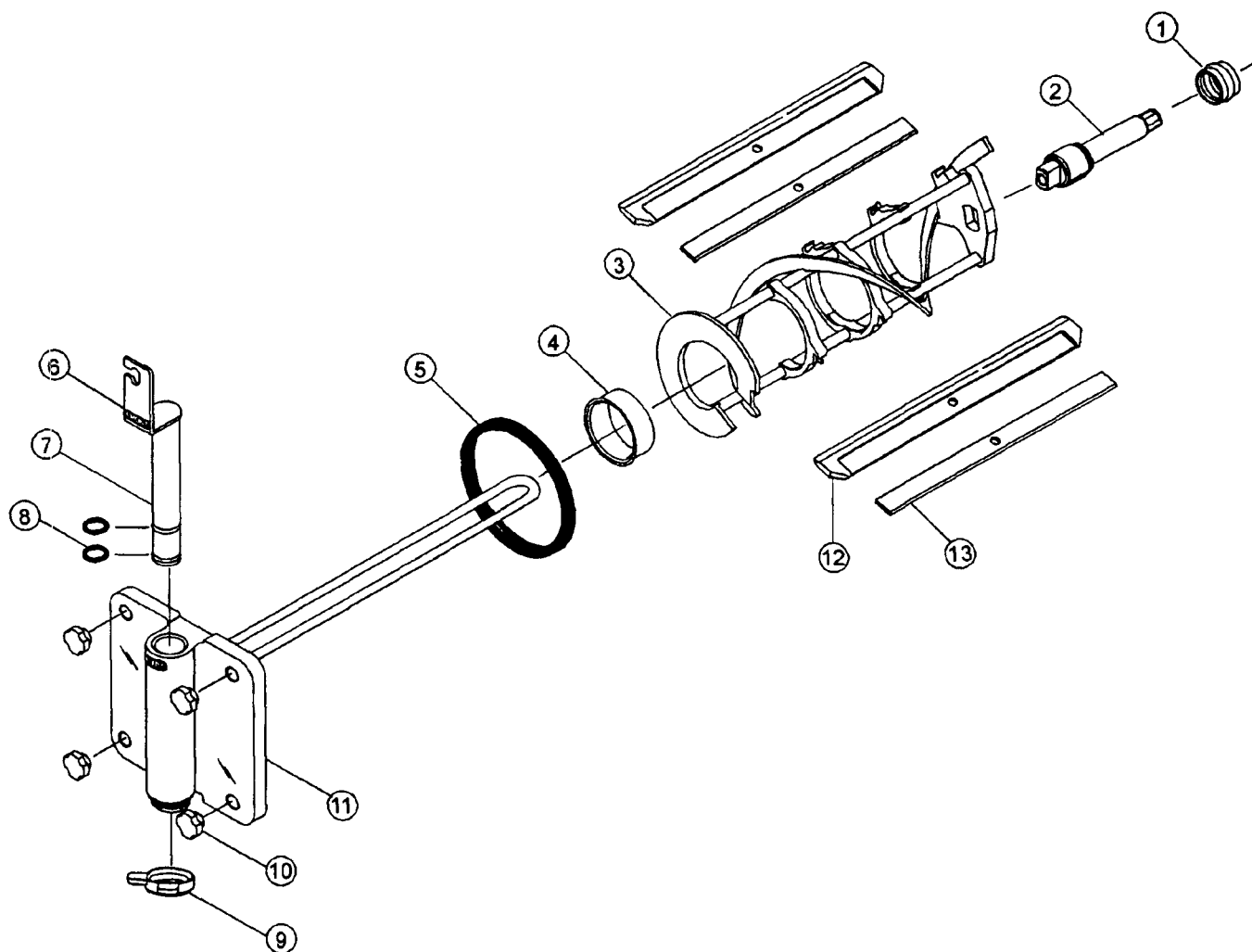
Operator Parts Identification



Item	Description	Part No.
1	Cover A.-Hopper-Standard	X38458
1a	Knob-Hopper Cover	025429
2	Gasket-Hopper Cover-20 Qt.	038375
3	Pan-Drip - 11-5/8 Long	027503
4	Tube-Feed-SS	028967-3
5	Panel-Rear	013637
6	Panel-Side- Upper Right	028707
7	Panel A.-Side Lower R & L	X24397

Item	Description	Part No.
8	Stud-Nose	022822
9	Panel-Side Upper Left	028706
10	Shield-Splash 15" x 5-13/32	022763
11	Tray-Drip 14-7/8 x 5-1/8	013690
12	Panel-Service	013638
13	Panel A.-Front	X14238-SP
14	Louver-Side	013631

Model 741 Door Assembly



Item	Description	Part No.
1	Seal-Drive Shaft	032560
2	Shaft-Beater	033498
3	Beater A.-7 Qt.-1 Pin Support	X46233
4	Bearing-Front	013116
5	Gasket-Door 5.177 ID x 5.9380	016672
6	Decal-Lift Plate Front	015200
7	Valve A.-Draw	X13624-SP

Item	Description	Part No.
8	O-Ring 1-1/16 OD x .139 W	020571
9	Cap-Design 1.188" ID 6 Point	013139-6
10	Nut-Stud	021508
11	Door A.-1 Spout 7 Qt.	X30272-SER
12	Blade-Scraper-Plastic	046237
13	Clip-Scraper Blade - 8.75 Inch	046238

Section 7

Important: To the Operator

Indicator Light "Mix Low"

The Model 741 is equipped with a "MIX LOW" light located on the front of the machine. When the light begins to flash, it indicates that the mix hopper has a low supply of mix. At this time, the hopper should be filled with mix. If you neglect to add mix when the light begins to flash, eventual damage to the beater, blades, drive shaft, and freezer door may occur.

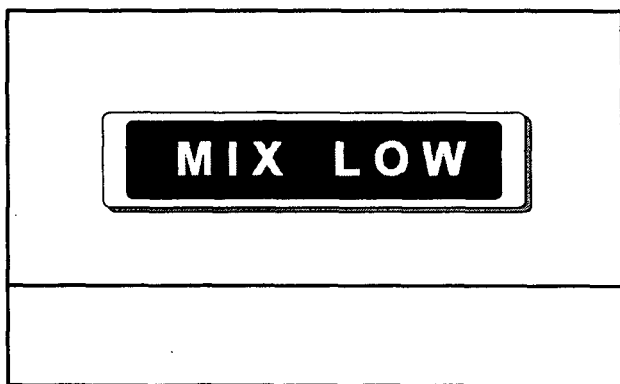


Figure 3

Symbol Definitions

The following chart identifies the symbol definitions used on the operator switches.



= The "WASH" keypad.



= The "OFF" keypad.



= The "ON/AUTO" keypad.

Control Switch

The center position is "OFF". The **right** position is "AUTO", which activates the beater motor and the refrigeration system. The **left** position is "WASH" which activates the beater motor only.

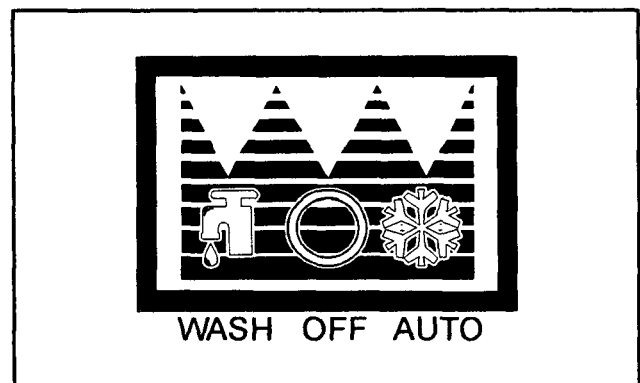


Figure 4

Reset Button

The reset button is located on the lower front panel.

The reset button protects the beater motor from an overload condition. If an overload occurs, the reset mechanism will trip. To properly reset the freezer, place the control switch in the "OFF" position. Press the reset button firmly. Place the control switch in the "WASH" position and observe the freezer's performance. Once satisfied, place the control switch back in the "AUTO" position.

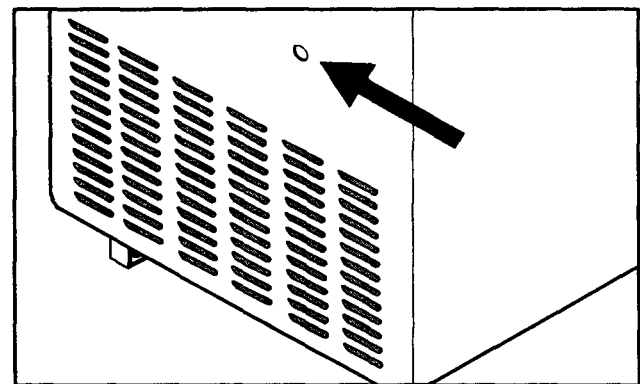


Figure 5



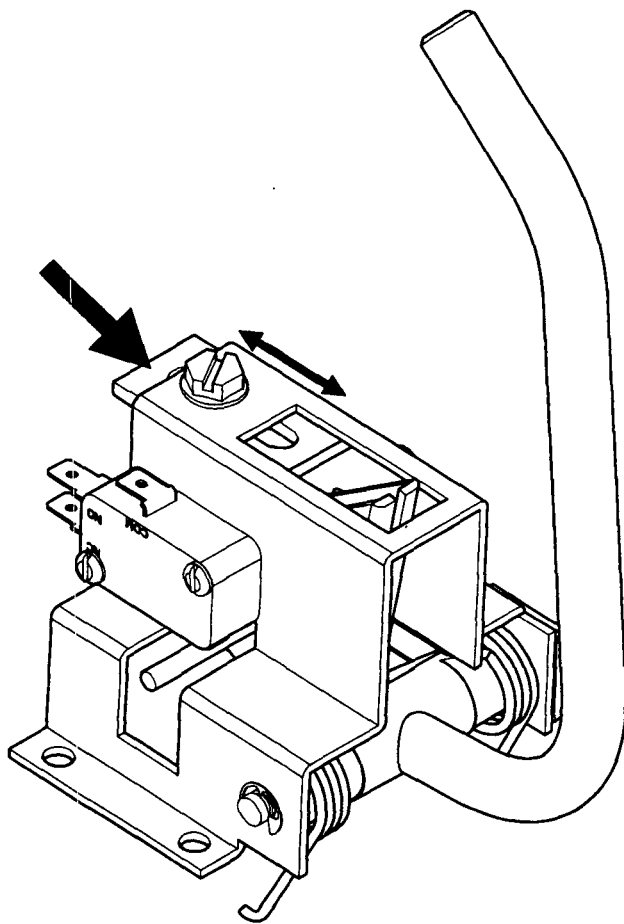
IMPORTANT: Do not use metal objects to press the reset button.

Thermistor Control

The viscosity (thickness) of the product is controlled by a temperature sensing device called the thermistor. To achieve a thicker product, turn the control **clockwise**, and turn the control **counterclockwise** to achieve a thinner product. Allow the refrigeration system to cycle on and off 2 or 3 times before an accurate consistency can be evaluated.

Draw Rate

The draw rate can be adjusted by raising and lowering the draw switch bracket. A technician should perform this task, and set the rate at 5 to 7.5 ounces of product per 10 seconds.



Optional Features

Separate Hopper Refrigeration System (SHR)

“Standby”

The Separate Hopper Refrigeration System (SHR) and the Cylinder Temperature Retention System (CTR) are **standard features**. This feature is referred to as “STANDBY”. The SHR incorporates the use of a separate small refrigeration system to maintain the mix temperature in the hopper to below 40°F. (4.4°C.) This assures bacteria control. The CTR works with the SHR to maintain a good quality product. During long “No Sale” periods, it becomes necessary to warm the product in the freezing cylinder to approximately 35°F. to 40°F. (1.7°C. to 4.4°C.) to prevent overbeating and product breakdown.

Note: Some local health codes do not permit the use of “STANDBY”.



ALWAYS FOLLOW LOCAL HEALTH CODES.



IMPORTANT: Make sure your hands are sanitized before performing these instructions:

To activate SHR and CTR, place the air tube (end without the hole) into the mix inlet hole.

Place the control switch in the “AUTO” position, and turn the STANDBY switch to the “ON” position. The unit will operate as a refrigerator for product in the hopper and freezing cylinder.

To remove the unit from the “STANDBY” mode, place the control switch in the “AUTO” position, and turn the standby switch to the “OFF” position. The unit will resume the normal operating mode.

When the unit cycles off, remove the hopper cover, and place the feed tube in its original position.

Replace the hopper cover.



IMPORTANT: The “STANDBY” mode should *not* be used in lieu of daily disassembly, cleaning, and sanitizing. Follow your local health codes regarding this issue.

Section 8

Operating Procedures

The Model 741 stores 20 quarts (18.9 liters) of mix in the hopper. The mix then flows **by gravity** through a mix feed tube down into the freezing cylinder. The freezing cylinder holds 7 quarts (6.6 liters) of mix.

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's cleaning.

The following procedures will show you how to assemble the parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first portion.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to page 23, "Disassembly" and start there.

Assembly



MAKE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION TO ELIMINATE THE CHANCE OF MOVING PARTS.

Note: When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).

Step 1

Install the drive shaft. Lubricate the groove and shaft portion that comes in contact with the bearing on the beater drive shaft. Slide the seal over the shaft and groove until it fits into place. **DO NOT** lubricate the hex end of the drive shaft. Fill the inside portion of the seal with 1/4" more lubricant and evenly lubricate the flat side of the seal that comes in contact with the bearing.

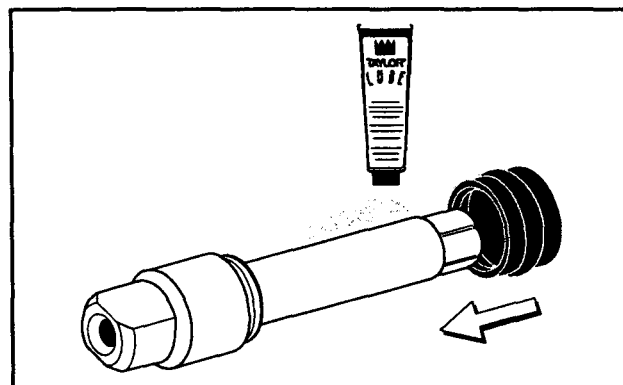


Figure 6

Insert the drive shaft through the rear shell bearing in the freezing cylinder and engage the hex end firmly into the gear box coupling.

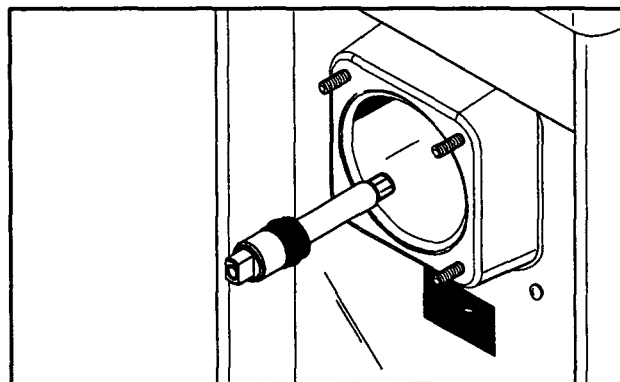


Figure 7

Step 2

Install the beater assembly. First check the scraper blade(s) for any nicks or signs of wear. If any nicks are present, replace the blade(s).

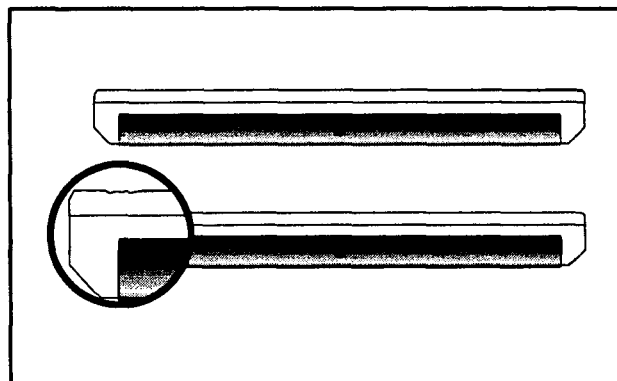


Figure 8

Note: To prevent costly damage, the hole in the scraper blade must fit securely over the pin.

If the blades are in good condition, place the rear scraper blade over the rear holding pin on the beater, knife edge to the outside. Holding the rear blade on the beater, slide the assembly halfway into the freezing cylinder. Install the front scraper blade over the front holding pin. Slide the beater assembly the rest of the way into the freezing cylinder.

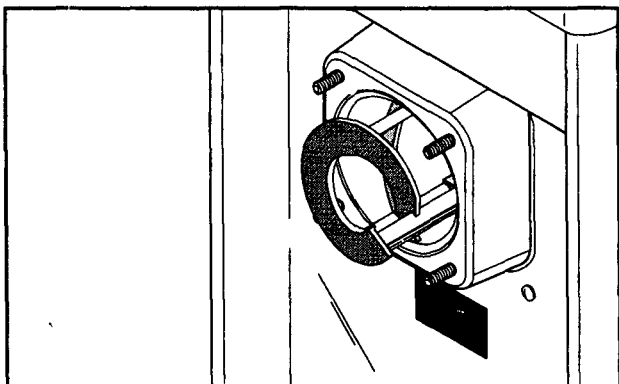


Figure 9

Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater is properly seated. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 3

Install the draw valve. Slide the two o-rings into the grooves on the draw valve and lubricate them with Taylor Lube.

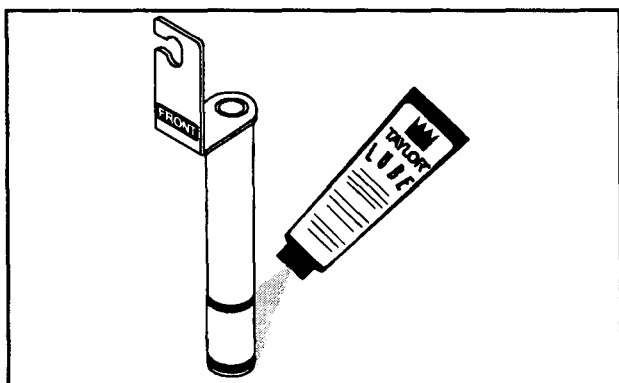


Figure 10

Lubricate the inside of the freezer door spout, top and bottom. Insert the draw valve into the freezer door from the **top**. It will be necessary to rotate the draw valve to the **right** when assembling the door to the freezer.

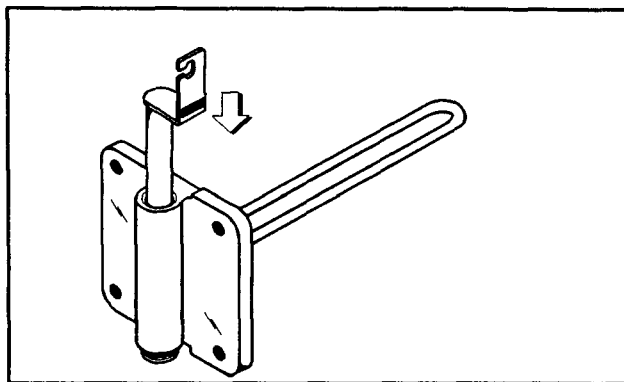


Figure 11

Step 4

Install the freezer door. Place the freezer door gasket into the groove on the back of the freezer door. Slide the front bearing over the baffle rod so the flanged edge is against the door. **Do not lubricate the gasket or bearing.**

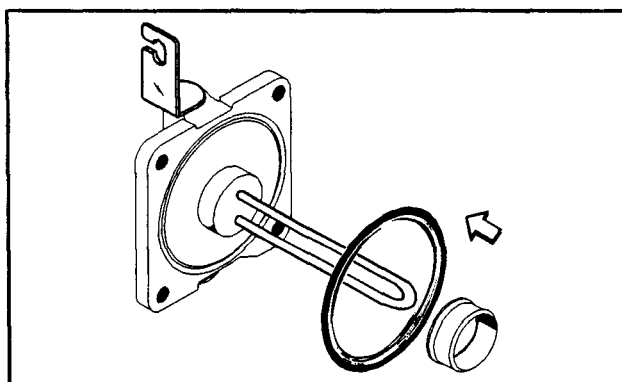


Figure 12

Insert the baffle rod through the beater in the freezing cylinder. With the door seated on the freezer studs, install the handscrews. Tighten equally in a crisscross pattern to insure that the door is snug.

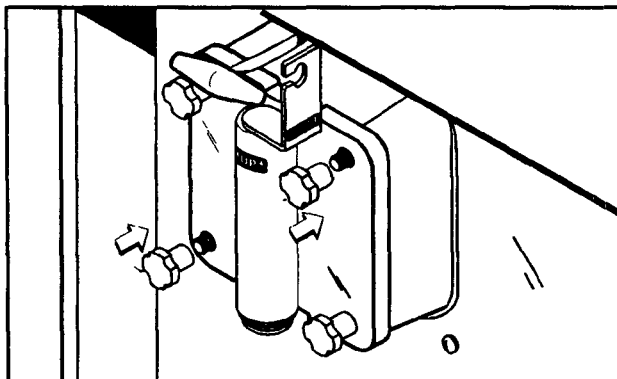


Figure 13

Rotate the draw valve bracket to the **left**. Center it into position by raising the draw arm and placing it into the slotted groove of the draw valve bracket.

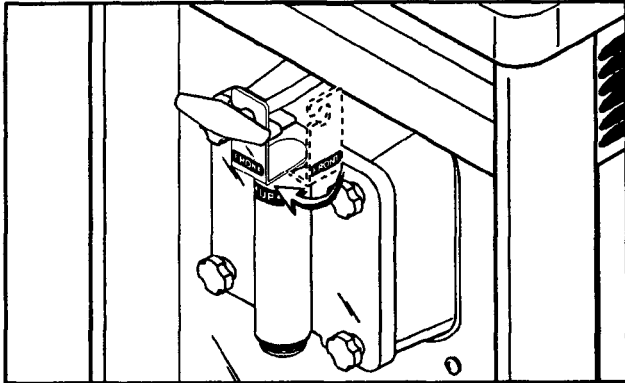


Figure 14

Step 5

Snap the design cap over the end of the door spout.

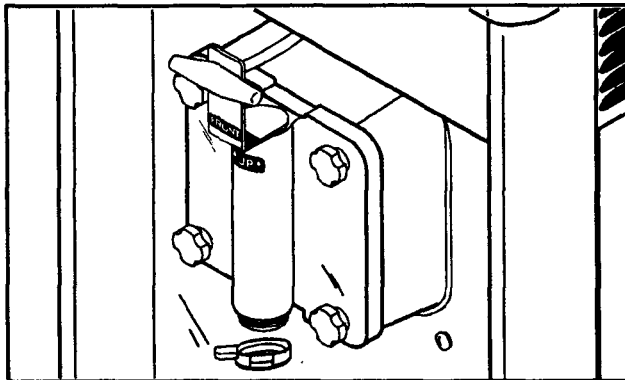


Figure 15

Step 6

Lay the mix feed tube in the bottom of the mix hopper.

Step 7

Install the front drip tray and splash shield under the door spout(s).

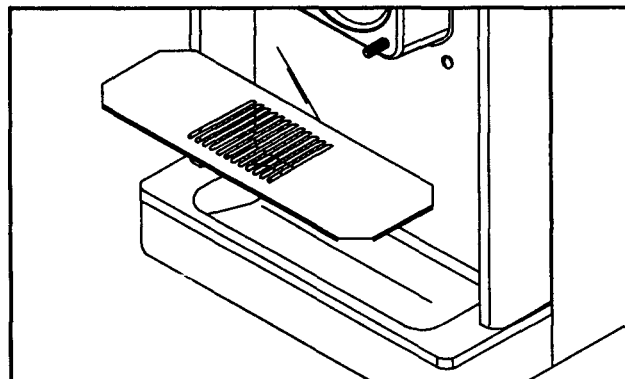


Figure 16

Step 8

Slide the rear drip pan into the hole(s) in the side panel.

Sanitizing

Step 1

Prepare two gallons (7.6 liters) of an approved 100 PPM sanitizing solution (example: Kay-5™). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.**

Step 2

Pour the two gallons (7.6 liters) of sanitizing solution into the hopper and allow it to flow into the freezing cylinder.

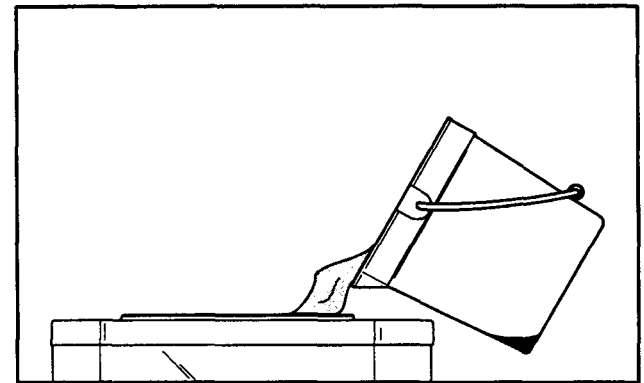


Figure 17

Step 3

While the solution is flowing into the freezing cylinder, brush clean the hopper. While cleaning the mix hopper, take particular care in brushing the mix level sensing probe on the rear wall of the hopper, the mix inlet hole, and the mix feed tube.

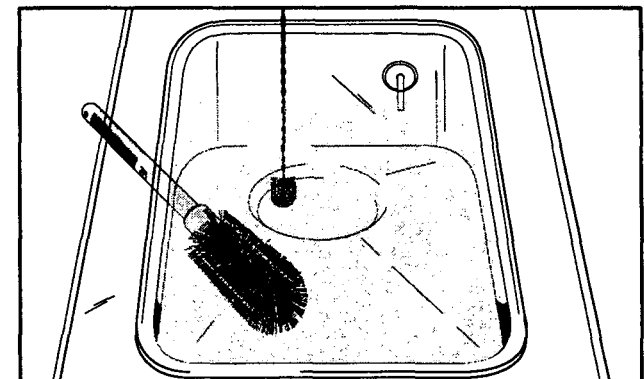


Figure 18

Step 4

Place the control switch in the "WASH" position. This will cause the sanitizing solution in the freezing cylinder to agitate. Allow the solution to agitate for five minutes.



Figure 19

Step 5

Place an empty pail beneath the door spout and raise the draw arm. Draw off all the sanitizing solution.

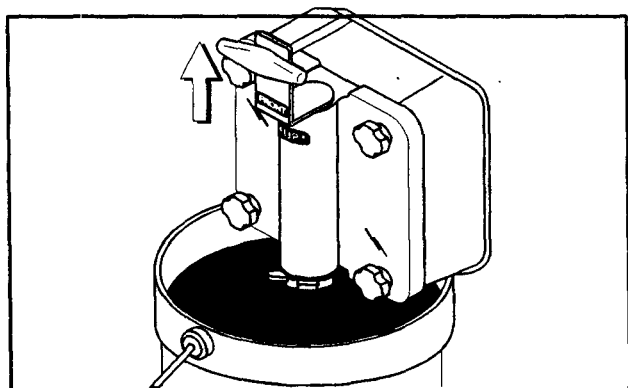


Figure 20

Step 6

When the sanitizer stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.



Note: You have just sanitized the freezer; therefore, **be sure your hands are sanitized** before continuing these instructions.

Step 7

Stand the mix feed tube in the corner of the mix hopper.

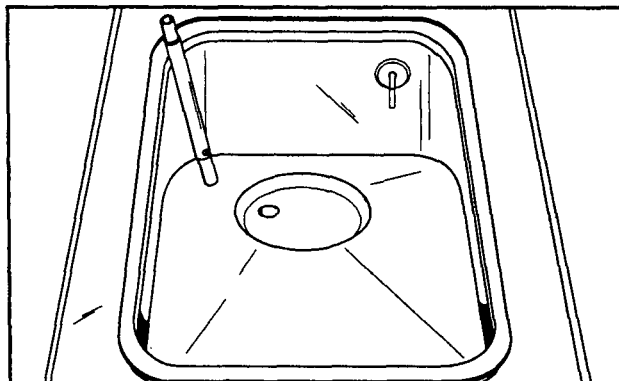


Figure 21

Priming

Prime the machine as close to the time of first product draw as possible.

Step 1

Place a mix pail beneath the door spout and raise the draw arm. Pour two gallons (7.6 liters) of **fresh** mix into the hopper and allow it to flow down into the freezing cylinder. This will force out any remaining sanitizing solution. When full strength mix is flowing from the door spout, lower the draw arm.

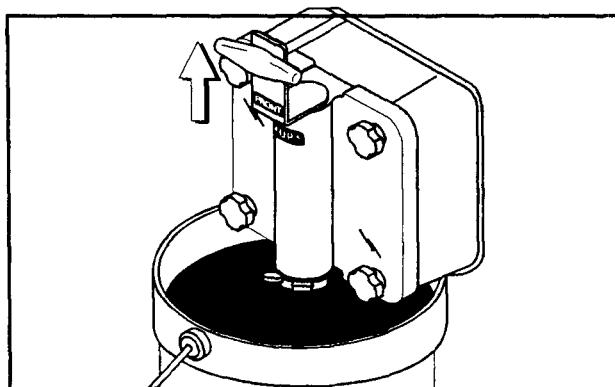


Figure 22

Step 2

When the mix has stopped bubbling down into the freezing cylinder, install the mix feed tube into the mix inlet hole.

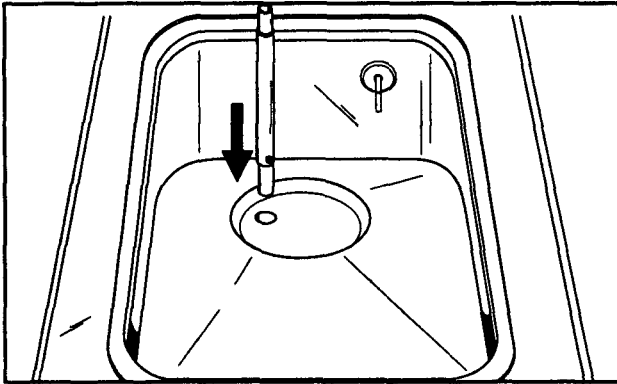


Figure 23

Step 3

Place the control switch in the "AUTO" position. When the unit cycles off, the product will be at serving temperature.



Figure 24

Step 4

Fill the hopper with mix. As the mix level comes in contact with the mix level sensing probe on the rear wall of the hopper, the "MIX LOW" light will extinguish.

Step 5

Place the mix hopper cover in position.

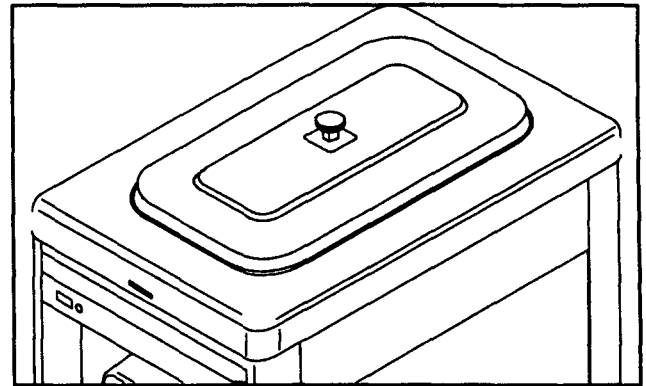


Figure 25

Closing Procedure

To disassemble your unit, the following items will be needed:

- Two cleaning pails
- Sanitized stainless steel rerun can with lid
- Necessary brushes (provided with freezer)
- Cleaner
- Single service towels

Draining Product From the Freezing Cylinder**Step 1**

Place the control switch in the "OFF" position.

Step 2

Remove the hopper cover and the mix feed tube. Take these parts to the sink for cleaning.

Step 3

With a sanitized pail under the door spout, place the control switch in the "WASH" position and raise the draw arm. When all the product stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position. If local health codes permit, empty the rerun into the sanitized rerun can. Cover the container and place it in the walk-in cooler.



ALWAYS FOLLOW LOCAL HEALTH CODES.

Rinsing

Step 1

Pour two gallons (7.6 liters) of **cool**, clean water into the mix hopper. With the brushes provided, scrub the mix hopper, the mix inlet hole, and the mix level sensing probe.

Step 2

With a mix pail beneath the door spout, place the control switch in the "WASH" position and raise the draw arm. Drain all the rinse water from the freezing cylinder. When the rinse water stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Repeat this procedure until the rinse water being drawn from the freezing cylinder is **clear**.

Cleaning

Step 1

Prepare two gallons (7.6 liters) of an approved cleaning solution (example: Kay-5™). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.**

Step 2

Pour the two gallons (7.6 liters) of cleaning solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

While the solution is flowing into the freezing cylinder, brush clean the mix hopper, the mix inlet hole, and the mix level sensing probe.

Step 4

Place the control switch in the "WASH" position. This will cause the cleaning solution in the freezing cylinder to agitate.

Step 5

Place an empty mix pail beneath the door spout and raise the draw arm. Draw off all the cleaning solution. When the solution stops flowing from the door spout, lower the draw arm and place the control switch in the "OFF" position.

Disassembly

Note: Failure to remove parts, brush clean and then air dry these parts, will result in damage to the related parts.

Step 1



BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION TO ELIMINATE THE CHANCE OF MOVING PARTS.

Step 2

Remove the handscrews, the freezer door, the gasket, the front bearing, the beater, the scraper blade(s), and the drive shaft from the freezing cylinder. Take these parts to the sink for cleaning.

Step 3

Remove the rear drip pan from the front panel.

Note: If the drip pan is filled with an excessive amount of mix, it is an indication that the drive shaft seal should be replaced or was improperly lubricated.

Step 4

Remove the front drip tray and the splash shield.

Brush Cleaning

Step 1

Prepare a sink with an approved cleaning solution (example: Kay-5™). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS**

If an approved cleaner other than Kay-5™ is used, dilute it according to the label instructions.

IMPORTANT: Follow the label directions. Too **STRONG** of a solution can cause parts damage. Too **MILD** of a solution will not provide adequate cleaning. Make sure all brushes provided with the freezer are available for brush cleaning.

Step 2

Remove the seal(s) from the drive shaft(s).

Step 3

From the freezer door(s) remove:

- the gasket(s)
- the front bearing(s)
- the design cap(s)
- the draw valve(s)

Remove all o-rings.

Note: To remove o-rings, use a single service towel to grasp the o-ring. Apply pressure in an upward direction until the o-ring pops out of its groove. With the other hand, push the top of the o-ring forward. It will roll out of the groove and can be easily removed. If there is more than one o-ring to be removed, always remove the rear o-ring first. This will allow the o-ring to slide over the forward rings without falling into the open grooves.

Step 4

Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Take particular care to brush clean the draw valve core in the freezer door(s). Place all the cleaned parts on a clean dry surface to air dry overnight.

Step 5

Return to the freezer with a small amount of cleaning solution. With the black bristle brush, brush clean the rear shell bearing(s) at the back of the freezing cylinder(s).

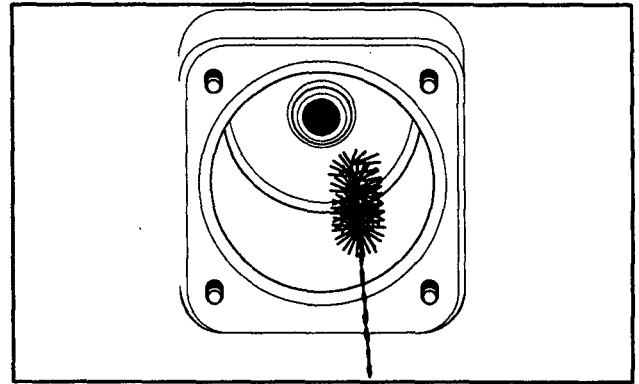


Figure 26

Step 6

Wipe clean all exterior surfaces of the freezer.

Section 9

Important: Operator Checklist

During Cleaning and Sanitizing



ALWAYS FOLLOW LOCAL HEALTH CODES.

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. The following check points should be stressed during the cleaning and sanitizing operations.

WE RECOMMEND DAILY CLEANING AND SANITIZING.

Troubleshooting Bacterial Count

- ☐ 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
- ☐ 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- ☐ 3. Use the white bristle brush to clean the mix inlet hole which extends from the mix hopper down to the rear of the freezing cylinder.
- ☐ 4. Use the black bristle brush to thoroughly clean the rear shell bearing located at the rear of the freezing cylinder. Be sure there is a generous amount of cleaning solution on the brush.
- ☐ 5. IF LOCAL HEALTH CODES PERMIT THE USE OF RERUN, make sure the mix rerun is stored in a sanitized, covered stainless steel container and is used the following day. DO NOT prime the machine with rerun. When using rerun, skim off the foam and discard, then mix the rerun with fresh mix in a ratio of 50/50 during the day's operation.
- ☐ 6. On a designated day of the week, run the mix as low as feasible and discard after closing. This will break the rerun cycle and reduce the possibility of high bacteria and coliform counts.
- ☐ 7. Properly prepare the cleaning and sanitizing solutions. Read and follow label directions carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.

- ☐ 8. The temperature of the mix in the mix hopper and walk-in cooler should be below 40°F. (4.4°C.).

Regular Maintenance Checks

- ☐ 1. Rotate scraper blades to allow both sides of the knife edge to wear evenly. This will contribute to self-sharpening and help maintain fast, efficient freezing.
- ☐ 2. Replace scraper blades that are nicked, damaged or worn.
- ☐ 3. Before installing the beater, be certain that scraper blades are properly attached over the pins.
- ☐ 4. Check the rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- ☐ 5. Using a screwdriver and cloth towel, keep the rear shell bearing and the female hex drive socket clean and free of lubricant and mix deposits.
- ☐ 6. Dispose of o-rings and seals if they are worn, torn, or fit too loosely, and replace with new ones.
- ☐ 7. Follow all lubricating procedures as outlined in "Assembly".
- ☐ 8. Check the condensers for accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned **monthly** with a soft brush. **Never** use screwdrivers or other metal probes to clean between the fins.
- ☐ 9. On water cooled units, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor technician.

Winter Storage

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is subject to freezing conditions.

Disconnect the freezer from the main power source to prevent possible electrical damage.

On water cooled freezers, disconnect the water supply. Relieve pressure on the spring in the water valve. Use air pressure on the outlet side to blow out any water remaining in the condenser, and then add a liberal amount of permanent type auto anti-freeze.

This is extremely important. Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Your local Taylor Distributor can perform this service for you.

Wrap detachable parts of the freezer such as the beater, blades, drive shaft, and freezer door. Place these parts in a protected, dry place. Rubber trim parts and gaskets can be protected by wrapping them with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication which attract mice and other vermin.

Section 10

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
1. No product being dispensed with the draw valve open and the control switch in AUTO.	a. The freezer door is installed upside down.	a. Install the door correctly.	19
	b. There is a freeze-up in the mix inlet hole.	b. Call service technician to adjust the hopper temperature.	--
	c. The beater motor is out on reset.	c. Reset the freezer.	16
	d. The beater is rotating counterclockwise.	d. Contact service technician to correct the rotation to clockwise.	--
	e. The draw valve is connected to the draw arm incorrectly.	e. The draw valve bracket must be correctly attached to the draw arm.	20
	f. The circuit breaker is off or the fuse is blown.	f. Turn the breaker on or replace the fuse.	--
	g. There is inadequate mix in the hopper.	g. Fill the hopper with mix.	21
2. The product is too cold.	a. The thermistor control is set too cold.	a. Adjust the thermistor control knob warmer.	17
	b. The draw handle is not fully closed.	b. The draw handle must be fully closed.	--
3. The product appears too soft.	a. The thermistor control is set too warm.	a. Adjust the thermistor control knob colder.	17
	b. There is not enough air space around the unit. (A/C)	b. Allow for adequate air flow across the condenser.	1
	c. The scraper blade(s) are worn.	c. Replace scraper blades regularly.	31
	d. Dirty condenser.	d. Clean regularly.	25
	e. The mix is out of date.	e. Use only fresh mix.	--
	f. The beater is rotating counterclockwise.	f. Contact service technician to correct rotation to clockwise.	--
	g. Loss of water (W/C)	g. Locate cause of water loss and correct.	25

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
3. The product appears too soft. (<i>Cont'd.</i>)	h. Product is broken down from overbeating.	h. Draw off some product to allow fresh product to enter the freezing cylinder.	--
4. The mix in the hopper is too cold.	a. The temperature is out of adjustment.	a. Call service technician to adjust the hopper temperature.	--
5. The mix in the hopper is too warm.	a. The temperature is out of adjustment.	a. Call service technician to adjust the hopper temperature.	--
	b. Hopper cover is not in position.	b. Place the cover in position.	22
	c. The control switch is OFF.	c. Place the control switch in AUTO.	22
	d. Warm mix was placed in the hopper.	d. Mix added to the hopper must be below 40°F (4.4°C).	--
6. The drive shaft is stuck in the gear box coupling.	a. Rounded corners of drive shaft, coupling, or both.	a. Call service technician to correct the cause and replace the necessary components. Do not lubricate the end of the drive shaft.	--
7. The freezing cylinder walls are scored.	a. The scraper blade(s) are not installed over the beater pins. The pins on the beater are broken.	a. Blade(s) must fit over the pins on the beater. Call service technician to repair the beater assembly.	19
	b. The beater assembly is bent.	b. Call service technician to repair or replace beater and to correct cause of insufficient mix in freezing cylinder.	--
	c. Missing or worn front bearing.	c. Install or replace the front bearing.	19
8. Excessive mix leakage into the rear drip pan.	a. Worn or missing drive shaft seal.	a. Replace regularly.	31
	b. Inadequate lubrication of drive shaft seal.	b. Lubricate properly.	18
	c. Worn rear shell bearing.	c. Call service technician to replace rear shell bearing.	--

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
8. Excessive mix leakage into the rear drip pan. (Cont'd.)	d. The drive shaft works forward.	d. Call service technician to correct. (The gear unit may be out of alignment.)	--
	e. The seal is installed inside-out on the drive shaft.	e. Install correctly.	18
	f. The wrong type of lubricant is being used (example: petroleum base lubricant.).	f. Use the proper lubricant (example: Taylor Lube).	--
9. Excessive mix leakage from the door spout.	a. Worn or missing draw valve o-rings.	a. Replace regularly.	31
	b. Inadequate lubrication of the draw valve o-rings.	b. Lubricate properly.	19
	c. The wrong type of lubricant is being used (example: petroleum base lubricant.).	c. Use the proper lubricant (example: Taylor Lube).	--
10. No freezer operation with the control switch in AUTO.	a. The unit is unplugged.	a. Plug into wall receptacle.	--
	b. Circuit breaker off or blown fuse.	b. Turn circuit breaker on or replace fuse.	--
	c. Beater motor out on reset.	c. Reset the freezer.	16
11. Low overrun.	a. Worn scraper blade(s).	a. Replace regularly.	31
	b. The mix feed assembly is not installed.	b. Install in mix inlet hole.	22
	c. Product is broken down from over-beating.	c. Draw off some product to allow fresh product to enter the freezing cylinder.	--
12. The freezer door works loose.	a. The freezer studs are damaged.	a. Call service technician to replace studs.	--
	b. The handscrews are damaged.	b. Replace the handscrews.	--
	c. There are enlarged holes in the freezer door.	c. Replace the door.	--
	d. The handscrews are not tightened.	d. Tighten the handscrews equally in a crisscross pattern.	19
	e. The beater assembly is rubbing the back of the door.	e. Call service technician to correct the problem.	--

Troubleshooting Thermistor Components

Step 1

Power Switch in the "AUTO" Position

Using a voltmeter, check the two terminals connecting the transformer wires to the controller. There should be a reading of 24 volts ($\pm 15\%$); if not, the transformer is not receiving line voltage or the transformer is faulty and should be replaced. If a proper reading is obtained, proceed to the next step.

Step 2

Power Switch in the "AUTO" Position

Using a voltmeter, make certain L1 power is being supplied to the common terminal of the controller. A reading of line voltage should be obtained. To accomplish this, measure voltage between the common terminal and any L2 power source. If a proper reading is not obtained, make sure there is line voltage at the incoming power supply. If there is incoming power, back track from the common terminal (L1) and determine where L1 is being interrupted and correct accordingly. If a proper reading is obtained, proceed to the next step.

Step 3

Power Switch in the "AUTO" Position

Remove the probe wires from the controller. Place a wire between the two probe terminals of the controller to short the component. This should activate the compressor. If this procedure does not activate the compressor, check for line voltage. If there is line voltage at the compressor contactor coil, the controller is acceptable.

Step 4

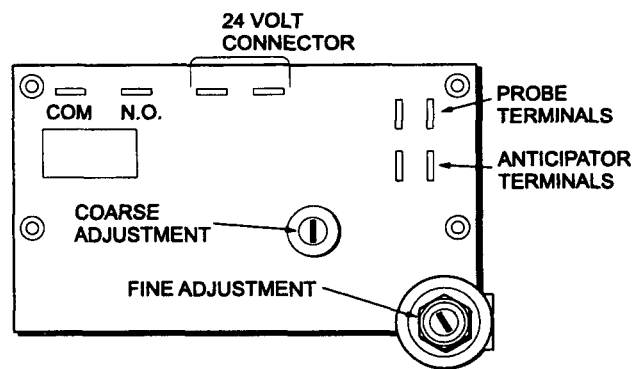
Power Switch in the "OFF" Position

Check the probe resistance. Disconnect both the yellow and black wires at the control, and measure their resistance with an ohmmeter. At room temperature, a reading of approximately 10,000 ohms should be obtained. If these readings are not obtained, replace the probe. When replacing the probe, fill the bulb-well with antifreeze. Connect the yellow wire to the white terminal and the black wire to the black terminal.

Step 5

Power Switch in the "OFF" Position

Check the anticipator microswitch by removing the wires connecting the switch to the controller, and check for continuity. If switch continuity exists when the draw handle is raised, the switch is effective. Continuity should break when the draw handle is lowered.



Section 11 Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 4 MONTHS	EVERY 6 MONTHS	ANNUALLY
Scraper Blade		X		
Drive Shaft Seal	X			
Freezer Door Gasket	X			
Front Bearing	X			
Draw Valve O-Ring	X			
White Bristle Brush, 3" x 7"			Inspect & Replace if Necessary	Minimum
White Bristle Brush, 9/16" x 38"			Inspect & Replace if Necessary	Minimum
White Bristle Brush, 1-1/2" x 2"			Inspect & Replace if Necessary	Minimum
Black Bristle Brush, 1" x 2"			Inspect & Replace if Necessary	Minimum
Double-Ended Brush			Inspect & Replace if Necessary	Minimum

Section 12

Service Parts Functions

PART DESCRIPTION	FUNCTION
Compressor	Provides circulation of refrigerant.
Condenser (air or water cooled)	Condenses refrigerant from a vapor to a liquid by removing heat from the refrigerant.
Dryer Filter	Removes foreign matter and moisture from the refrigerant.
Expansion Valve	Meters liquid refrigerant from the liquid line into the insulated shell evaporator.
Shell and Hopper Assembly	Insulated evaporator providing freezing and storage of product.
E.P.R. Valve	Controls pressure in the hopper evaporator.
Beater Line Starter	When the coil is energized, the relay closes. This permits power to flow to the overload relay, then to the beater motor.
Compressor Relay	When the coil is energized, the relay closes. This permits power to flow to the compressor.
Control Switch	When in "WASH", the control switch permits power to travel to the beater line starter. When in "AUTO", it permits power to travel to the thermistor control.
Thermistor Control	Monitors product in the freezing cylinder. When the product begins to get warm, the thermistor control allows power to flow to the compressor relay.
Transformer (24 V)	Powers the thermistor control.
Mix Level Control	Activates the "MIX LOW" light when the mix level in the hopper becomes inadequate.
Door Switch	When the draw arm is raised, a micro switch closes and sends a signal to the thermistor control.
Water Valve (water cooled)	Controls the flow of water to the condenser by sensing the increasing and decreasing pressures at the high side of the compressor.
High Pressure Switch	Senses high head pressure at the compressor. In the event of a high pressure situation, the switch breaks power to the control switch and the freezer shuts down.
Blower (water cooled)	Dissipates heat from the interior of the freezer.
Fan Motor (air cooled)	Circulates air across the condenser.
Beater Motor	Drives the gear unit which in turn rotates the beater assembly.
Filter	Removes impurities from the refrigerant prior to the expansion valve.
Transformer	Used on high voltage units to reduce incoming voltage down to 230 volts to power the control circuitry.

Section 13

Parts List

741 Navy (460-60-3) HP62 Refrigerant

DESCRIPTION	PART NUMBER	741 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
ACCUMULATOR-COPPER 2"DIA 10"	047602	1	103		
BEARING-FRONT	013116	1	000		
BEARING-REAR SHELL *NICK.PLATE	031324	1	000		
+GUIDE-D RIP SEAL	028992	1	000		
+NUT-BRASS BEARING	028991	1	000		
+WASHER-BEARING LOCK	012864	1	000		
BEATER A-7QT-1 PIN-SUPPORT	X46233	1	103		
+BLADE-SCRAPER-PLASTIC 9-13/16L	046237	2	000		
+CLIP-SCRAPER BLADE*8.75 INCH*	046238	2	103		
BELT-AX41	023876	2	000		
BLOCK-TERMINAL 3P	039423	1	103		
BLOWER A.	X47833-27	1	103		
BOOT-CAPACITOR INSULATING	031314	1	000		
CAPACITOR-RUN- 10 UF/370V	033047	1	103		
HOUSING A.-WWHEEL	X30160	1	103		
MOTOR-BLOWER-208/230V 50/60 HZ	046536-27	1	103		
BRUSH-DOUBLE ENDED-PUMP&FEED T	013072	1	000		
BRUSH-DRAW VALVE 1-1/2"OD X 3"	014753	1	000		
BRUSH-MIX PUMP BODY-3"X7"WHITE	023316	1	000		
BRUSH-REAR BRG 1IN.DX2IN.LGX14	013071	1	000		
CAP-DESIGN-1.188"ID-6 POINT	013139-6	1	000		
COMPRESSOR	047519-62	1	512	TECUMSEH - 460-60-3	
COMPRESSOR	047701-27	1	512	SHR	
+CAPACITOR-START-60UF-220/275V	047703	1	103		
+COVER-TERMINAL-COMPRESSOR	047739	1	103		
+RELAY-START-COMPRESSOR-TL3G	047702-27	1	103		
CONDENSER-AC-12LX18HX2.6T-3R	048233	1	103	MAIN	
CONDENSER-AC-7X6X1.25-2 ROW	027155	1	103	SHR	
CONTROL-MIX LEVEL	031799-27	1	103		

+ Available Separately

DESCRIPTION	PART NUMBER	741 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
CONTROL-TEMPERATURE	028914	1	103	SHR	
CONTROL-THERMISTOR	X46015-SER	1	103		
+KNOB-ALUMINUM	027422	1	103		
COVER A.-HOPPER-STD	X38458	1	103	INCLUDES KNOB	
KNOB-MIX COVER	025429	1	103		
+GASKET-HOPPER COVER-20 QT-SGL	038375	1	000		
DECAL-CLEAN INST.-HOPPER	019029	1	000		
DECAL-DEC-TAYLOR	021872	1	000		
DECAL-STANDBY ON-OFF	048493	1	000		
DECAL-TROUBLESHOOTING	038374	1	000		
DECAL-WARNING *PANEL *	036529	3	000		
DEFLECTOR-BLOWER EXHAUST	048345	1	103		
DIAGRAM-WIRING	048342-62	1	000	460-60-3	
DOOR A.-1 SPOUT-7 QT	X30272-SER	1	103		
+DECAL-LIFT PLATE FRONT	015200	1	000		
+VALVE A.-DRAW	X13624-SP	1	103		
+O-RING-1-1/16 OD X.139W	020571	2	000		
DRYER-CAP. TUBE-HP62/R134A	047699	1	000	SHR	
DRYER-FILTER-HP62-3/8 X 1/4S	047521	1	000		
GASKET-DOOR 5.177ID X 5.938OD	016672	1	000		
GEAR A.*REDUCER	012235	1	212		
GUARD-BELT	013576	1	103		
GUIDE A.-DRIP PAN	X28698	1	103		
HOOD	023285	1	103		
KIT A.-TUNE UP*710-715-731-741	X33926	1	000		
BEARING-FRONT	013116	1	000		
CAP-DESIGN-1.188"ID-6 POINT	013139-6	1	000		
GASKET-DOOR 5.177ID X 5.938OD	016672	1	000		
O-RING-.643 OD X .077W	018572	2	000	FEED TUBE	
O-RING-1-1/16 OD X.139W	020571	2	000	DRAW VALVE	

+ Available Separately

DESCRIPTION	PART NUMBER	741 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
SEAL-DRIVE SHAFT	032560	1	000	DRIVE SHAFT	
TOOL-CLEANING O-RING REMOVAL	048260	1	000		
KNOB-DRAW VALVE	013635	1	103		
+NUT-LOCK KNOB	013649	1	103		
LABEL-DOOR CAUTION	032749	1	000		
LABEL-MIX COOLING ADJ-INTL SYM	020217	1	000		
LABEL-MOVING PARTS WARN	024315	3	000		
LABEL-WARM-COLD INT'L SYMBOL	013749	1	000		
LABEL-WARNING PANEL	036529	3	000		
LABEL-WIRING THREE PHASE	036880-3	1	000		
LIGHT-INDICATOR-ORANGE-ROUND	017450	1	103		
LIGHT-INDICATOR-RED-RECT.	023056-27	1	103	MIX LOW	
LOUVER-SIDE	013631	2	103		
LUBRICANT-TAYLOR 4 OZ.	047518	1	000		
MANUAL-OPERATOR		1	000		
MOTOR-2.0 HP	017650-33	1	212	SHR	
MOTOR-FAN	027309-27	1	103	HANDSCREWS	
NUT-STUD *GENERAL USAGE*	021508	4	103		
PAIL-MIX 10 QT.	013163	1	000		
PAN-DRIP 11-5/8 LONG	027503	1	103		
PANEL A.-FRONT *741*	X14238-SP	1	103		
PANEL A.-SIDE LOWER	X24397	2	103		
PANEL-REAR	013637	1	103		
PANEL-SERVICE	013638	1	103		
PANEL-SIDE UPPER LEFT	028706	1	103		
PANEL-SIDE UPPER RIGHT	028707	1	103		
PLATE-DEC-SINGLE-ROCKER SWITCH	022604	1	103		
PLUG-DRIP TRAY HOLE	029595	1	103		
PROBE A.-MIX *SQUARE*	X30922	1	103		
+DISC-PROBE *SQ HOLE*	030965	1	103		

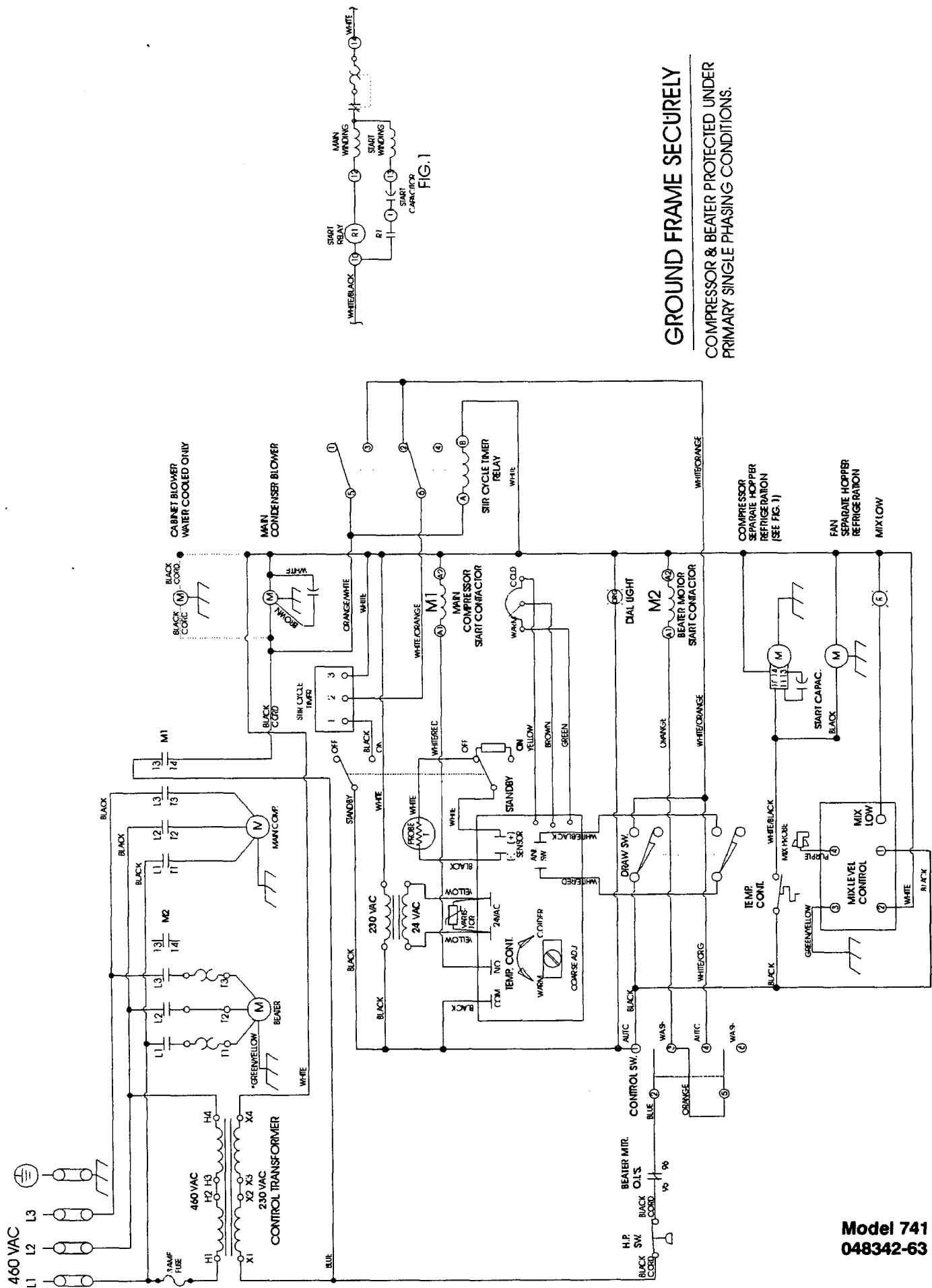
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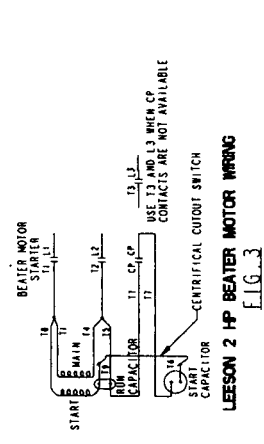
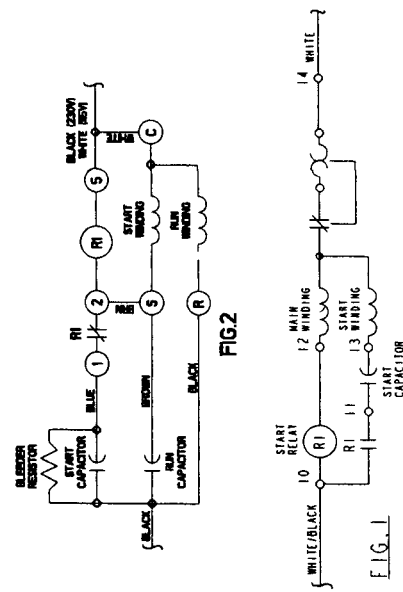
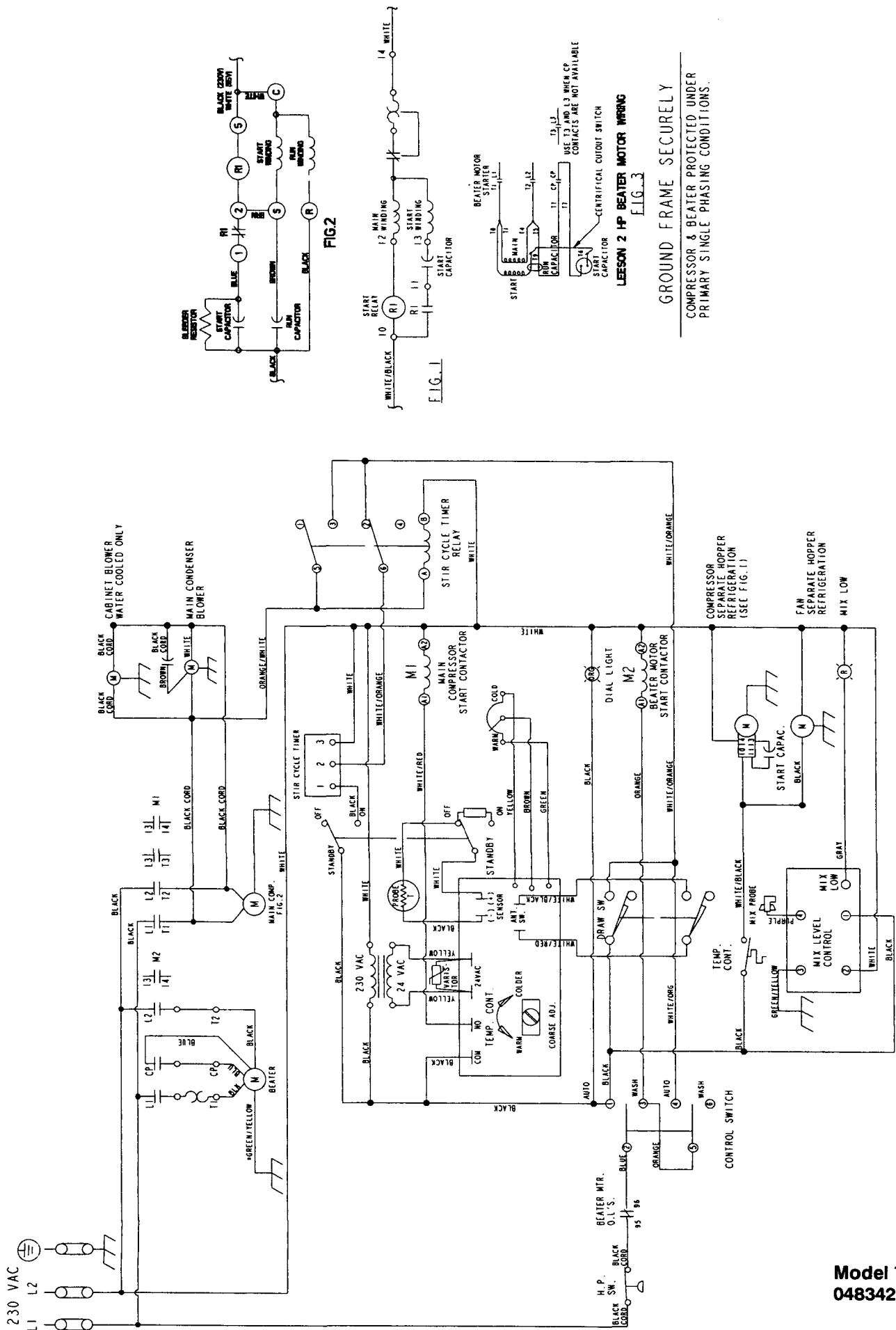
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+SPACER-PROBE *SQ HOLE*	030966	1	103		
PROBE A.-THERMISTOR	X31602	1	103		
PULLEY-2AK28-7/8	010294	1	103	BEATER MOTOR	
PULLEY-2AK74-5/8	027822	1	103	GEAR	
RELAY-3 POLE	012725-33	1	103		
RELAY-DPDT-20 A-230 V	026581-27	1	103	STIR CYCLE TIMER	
SANITIZER KAY-5 125 PACKETS	041082	1	000		
SHAFT-BEATER	033498	1	103		
+SEAL-DRIVE SHAFT	032560	1	000		
SHELL A.-INSULATED *19 INCH*	X49770	1	512		
+STUD-NOSE CONE	022822	4	103		
SHIELD-MIX-GEAR REDUCER 3-3/8"	013356	1	103		
SHIELD-SPLASH 15"L X 5-13/32"W	022763	1	103		
STARTER-BEATER	041950-33J	1	103	460-60-3	
SWITCH A.-DRAW *632-710-31-41-	X28891	1	103		
ARM A.-DRAW VALVE	X28874	1	103		
BRACKET-DOOR SWITCH	028875	1	103		
E-RING 3/16 .335 O.D.	049178	1	000		
PIN-PIVOT	015478	1	103		
SPRING-RETURN	015342	1	103		
SWITCH-LEVER-SPDT-10A-125-250V	028889	2	103		
SWITCH-PRESSURE 440 PSI-SOLDER	048230	1	103		
SWITCH-ROCKER-DPDT ON-OFF-ON	014237	1	103		
+BRACKET-ROCKER SWITCH	020820	1	103		
+CARD-WASH-OFF-AUTO	014091	1	000		
SWITCH-TOGGLE-DPDT*ON-NONE-ON	024295	1	103	SHR/CTR	
TIMER-CYCLE 5SEC ON/120SEC OFF	037188-27	1	103		
TRANS.-CONT. - 1 KVA	021093	1	103		
TRAY-DRIP 14-7/8L X 5-1/8 SGL	013690	1	103		
TRIM-REAR CORNER	013620	2	103		

+ Available Separately

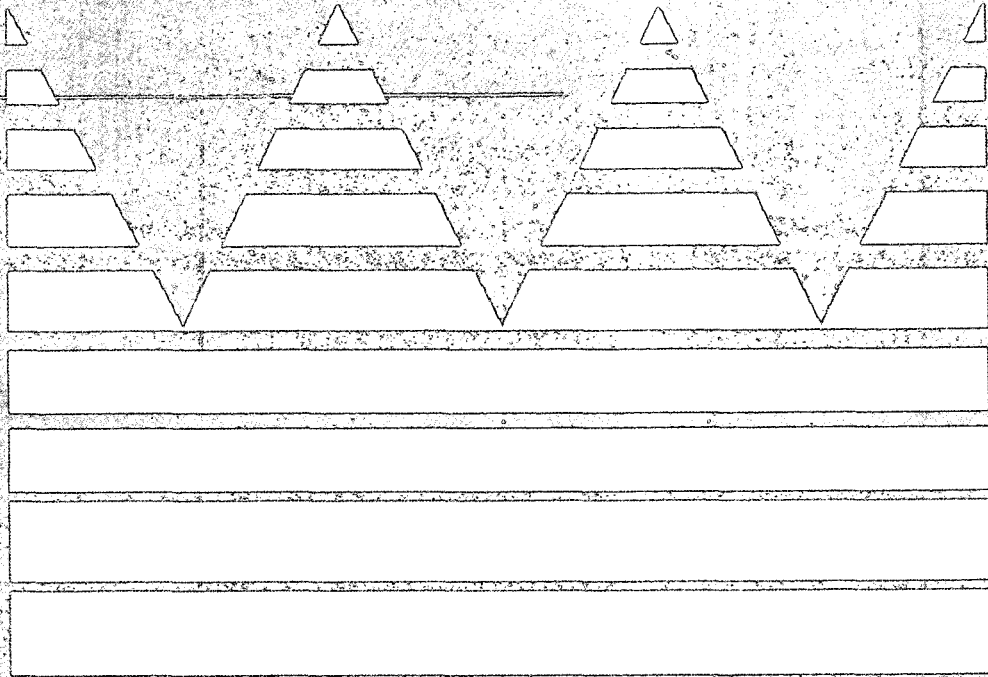
DESCRIPTION	PART NUMBER	741 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
TUBE-FEED-SS-3/16	028967-3	1	103		
VALVE-ACCESS 1/4FL X 1/4SOLDER	044404	2	103		
VALVE-ACCESS 1/4FL X 3/8SDR-90	044455	1	103		
VALVE-ACCESS 1/4 X 3/8 SOLDER	029406	1	103		
VALVE-EPR 1/4S	022665	1	103		
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	1	103		
+BOOT-EXPANSION VALVE	050900	1	000		.
VARISTOR A.-SLEEVE TERMINAL	X31547	1	103	THERMISTOR CONTROL	
VIDEO-TRAIN FILM-DUALMASTER/SH	043568-V	1	000		

+ Available Separately





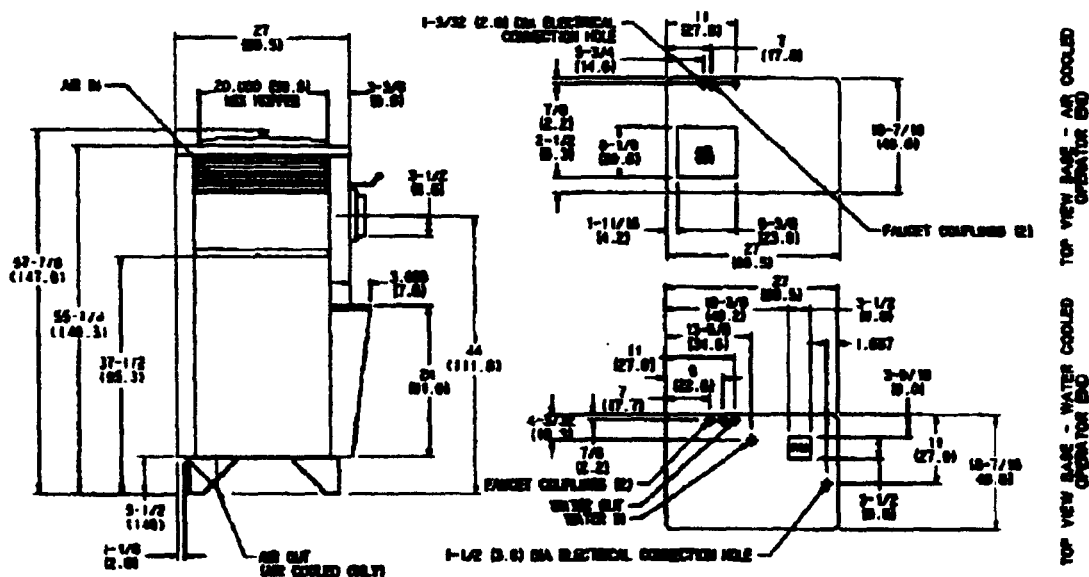
GROUND FRAME SECURELY
COMPRESSOR & BEATER PROTECTED UNDER
PRIMARY SINGLE PHASING CONDITIONS.



TAYLOR®

Specifications

Model 741



Mix Hopper

One, 20 quart (18.9 liter) capacity. Separate hopper refrigeration (SHR) maintains mix below 40°F (4.4°C) during AUTO and STANDBY modes.

Beater Motor

One, 2 HP.

Refrigeration Unit

One, 9,500 btu/hr. R404A.

Separate Hopper Refrigeration (SHR) -
One, 400 btu/hr. R134a

Electrical

Standard is 460-60-3; however, other electrical characteristics are available. All internal connections are completed at the factory. Requires 15A maximum fuse size and 14A minimum circuit ampacity. Consult the unit data label.

Water Cooled

Water inlet and drain connections are under the side of the base pan 3/8" FPT.

Air Cooled

Minimum 3" (76 mm) clearance around of sides, and install the deflector provided.

Dimensions

Width: 18-7/16" (468 mm)
Depth: 30" (762 mm)
Height: 57-7/8" (1470 mm)
Floor Clearance: 5-1/2" (140 mm)

Approximate Weights

Net: 437 lbs. (198.2 Kgs.)
Crated: 512 lbs. (232.2 Kgs.)

Continuing research results in steady improvements, therefore, this information and these specifications are subject to change without notice.

Ref: NAVSEAINST 4160.3A NAVSEA S0005AA-PRO-010/TMMP

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7a Page #	7b Para #	7c RECOMMENDED CHANGES AND REASONS
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8. ORIGINATOR'S NAME and WORK CENTER	9. DATE	10. PHONES Commercial/DSN/FAX Include extensions	11. TMMA of manual (NSDSA will complete)
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12. Ship or Activity Name and Address (Include UIC/CAGE/HULL)	13. ORIGINATOR'S E-MAIL ADDRESS
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